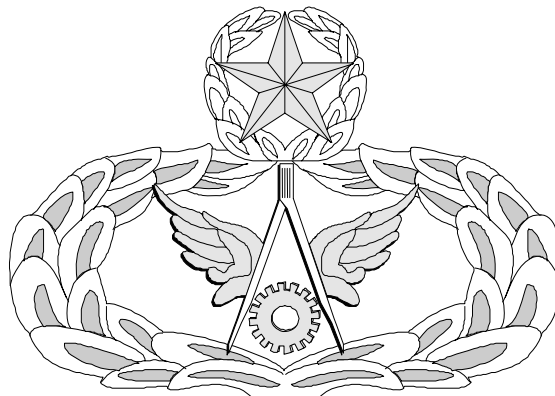


**DEPARTMENT OF THE AIR FORCE
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**CFETP 3E2X1
Parts I and II
1 Oct 2006**

AFSC 3E2X1

PAVEMENTS AND CONSTRUCTION EQUIPMENT OPERATOR



MASTER



BASIC



SENIOR

CAREER FIELD EDUCATION AND TRAINING PLAN

**PAVEMENTS AND CONSTRUCTION EQUIPMENT OPERATOR SPECIALTY
AFSC 3E2X1
CAREER FIELD EDUCATION AND TRAINING PLAN**

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**PAVEMENTS AND CONSTRUCTION EQUIPMENT OPERATOR SPECIALTY
AFSC 3E2X1
CAREER FIELD EDUCATION AND TRAINING PLAN**

Preface

1. This Career Field Education and Training Plan (CFETP) is a comprehensive education and training document that identifies life-cycle education/training requirements, training support resources, and minimum requirements for this specialty. The CFETP will provide personnel a clear career path to success and instill rigor in all aspects of career field training.

2. The CFETP consists of two parts. Supervisors plan, manage, and control training within the career field using both parts of the plan.

2.1. Part I provides information necessary for overall management of the specialty. **Section A** explains how everyone will use the plan. **Section B** identifies career field progression information, duties and responsibilities, training strategies, and career field path. **Section C** associates each level with specialty qualifications (knowledge, education, experience, training, and other). **Section D** indicates resource constraints. Some examples are funds, manpower, equipment, facilities. **Section E** identifies transition training guide requirements for SSgt through MSgt.

2.2. Part II includes the following: **Section A** identifies the Specialty Training Standard (STS) and includes duties, tasks, technical references to support training, Air Education and Training Command (AETC) conducted training, wartime course, core task, and correspondence course requirements. **Section B** contains the course objective list and training standards supervisors will use to determine if Airmen satisfied training requirements. **Section C** identifies available support materials. Air Force Qualification Training Packages (AFQTPs) and CerTests support both upgrade training (UGT) and qualification training. **Section D** identifies a training course index supervisors can use to determine resources available to support training. Included here are both mandatory and optional courses. **Section E** identifies MAJCOM unique training requirements supervisors can use to determine additional training required for the associated qualification needs. **Section F** identifies home station training references and courses material required for this specialty in support of contingency/wartime training.

2.2.1 At unit level, supervisors and trainers will use Part II to identify, plan, and conduct training commensurate with the overall goals of this guide.

3. Using guidance provided in the CFETP will ensure individuals in this specialty receive effective and efficient training at the appropriate point in their careers. This plan will enable us to train today's work force for tomorrow's jobs.

Abbreviations and Terms Explained

Advanced Distributive Learning (ADL). Anytime, anyplace learning within DoD consisting of instructional modules comprised of sharable content objectives in an Internet/Intranet environment.

Advanced Training (AT). A formal course which provides individuals who are qualified in one or more positions of their Air Force Specialty (AFS) with additional skills/knowledge to enhance their expertise in the career field. Training is for selected career Airmen at the advanced level of the AFS.

Air Force Career Field Manager (AFCFM). An individual on the Air Staff charged with the responsibility for overseeing all training and career field management aspects of an Air Force specialty or group of specialties.

Air Force Job Qualification Standard/Command Job Qualification Standard (AFJQS/CJQS). A comprehensive task list that describes a particular job type or duty position. Used by supervisors to document task qualifications. The tasks on the AFJQS/CJQS are common to all persons serving in the described duty position.

Air Force Qualification Training Package (AFQTP). An instructional package designed for use at the unit to qualify, or aid qualification, in a duty position or program, or on a piece of equipment. AFQTPs identify the Air Force's standardized method for performing the task. The AFQTP may be printed (paper-based), computer-based, or in other audiovisual media.

Battlefield Airman. Airmen specifically identified as Battlefield Airmen perform tasks to integrate and synchronize air and space operations in the deep or extended battlespace. These Airmen routinely fight with joint maneuver and SOF units.

Career Field Education and Training Plan (CFETP). A comprehensive, multipurpose document encapsulating the entire spectrum of education and training for a career field. It outlines a logical growth plan that includes training resources and is designed to make career field training identifiable, to eliminate duplication, and to ensure this training is budget defensible.

Certification and Testing (CerTest). A multi-media evaluation program used to test an individual's knowledge of principles and procedures in their career field.

Commercial Off The Shelf (COTS). Commercially-procured training products.

Computer-Based Training (CBT). A self-paced stand-alone computer product used to deliver interactive subject and task knowledge.

Continuation Training. Additional training exceeding requirements with emphasis on present and future duty assignments.

Core Task. A task Air Force Career Field Managers (AFCFMs) identified as a minimum qualification requirement within an Air Force specialty or duty position. These tasks exemplify the essence of the career field.

Course Objective List (COL). A publication derived from initial/advanced skills course training standard, identifying the tasks and knowledge requirements, and respective standards provided to achieve a 3-, 5-, and 7-skill level in this career field. Supervisors use the COL to assist in conducting graduate evaluations in accordance with AFI 36-2201, Developing, Managing, and Conducting Training.

Critical Task. Tasks that have been identified by the work center supervisor as having a detrimental effect on mission accomplishment if not performed correctly. Critical tasks may or may not be the same as core tasks but are mandatory if identified as ‘critical’ to the individual’s position by the supervisor or work center.

Diamond Tasks (). Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception--equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task’s AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available.

Distance Learning (DL). Includes Video Teleseminar (VTS), Video Teletraining (VTT), and Computer-Based Training (CBT). Formal courses that a training wing or a contractor develops for export to a field location (in place of resident training) for trainees to complete without the on-site support of the formal school instructor. For instance, courses are offered by Air Force Institute of Technology, Air University, and Training Detachment.

Duty Position Task. The tasks assigned to an individual for the position currently held. These include as a minimum all core tasks, critical tasks, and any other tasks assigned by the supervisor.

Enlisted Specialty Training (EST). A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade Airmen in each skill level of a specialty.

Exportable Training. Additional training via computer-assisted, paper text, interactive video, or other necessary means to supplement training.

Field Technical Training (Type 4 and Type 7). Special or regular on-site training conducted by a Field Training Detachment (FTD) (Type 4) or by a Mobile Training Team (MTT) (Type 7).

Initial Skills Training. AFS-specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training wings.

Instructional System Development (ISD). A deliberate and orderly, but flexible, process for planning, developing, implementing, and managing instructional systems. It ensures personnel are taught in a cost-efficient way the knowledge, skills, and attitudes essential for successful job performance.

MAJCOM Functional Manager (MFM). Senior leaders, designated by the appropriate functional authority (FA) who provide day-to-day management and responsibility over specific functional communities at the MAJCOM, FOA, DRU, or ARC level. While they should maintain an institutional focus in regards to resource deployment and distribution, FMs are responsible for ensuring their specialties are equipped, developed, and sustained to meet future needs of the total Air Force mission.

Occupational Survey Report (OSR). A detailed report showing the results of an occupational survey of tasks performed within a particular AFS.

On-the-Job Training (OJT). Hands-on, over-the-shoulder training conducted to certify personnel in both upgrade (skill-level award) and job qualification (duty position certification) training.

Optimal Training. The ideal combination of training settings resulting in the highest levels of proficiency on specified performance requirements within the minimum time possible.

Proficiency Training. Additional training, either in-residence, exportable advanced training courses, or on-the-job training provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade.

Qualification Training (QT). Actual hands-on task performance training designed to qualify an individual in a specific duty position. This portion of the dual channel on-the-job training program occurs both during and after the upgrade training process. It is designed to provide the performance skills required to do the job.

Readiness Training Package (RTP). Establishes standard levels of knowledge and proficiency for common Disaster Preparedness and Readiness subject areas by providing instructors with training references, materials, and lesson objectives used in teaching and evaluating the course subject matter.

Representative Sites. Typical organizational units having similar missions, weapon systems or equipment, or a set of jobs, used as a basis for estimating average training capacities and costs.

Resource Constraints. Resource deficiencies, such as money, facilities, time, manpower, or equipment that precludes desired training from being delivered.

Skills Training. A formal course resulting in the award of a skill level.

Specialty Training. A mix of formal training (technical school) and informal training (on-the-job) to qualify and upgrade Airmen in the award of a skill level.

Specialty Training Standard (STS). Describes skills and knowledge that Airmen in a particular AFS need on the job. It further serves as a contract between the Air Education and Training Command (AETC) and the user to show the overall training requirements for an AFS taught in the resident and nonresident courses.

Spin-up Training (SUT). Training required just prior to a select deployment that delivers training necessary for mission accomplishment. It is typically predicated on hard to attain contingency skills.

Standard. An exact value, a physical entity, or an abstract concept, established and defined by authority, custom, or common consent to serve as a reference, model, or rule in measuring quantities or qualities, establishing practices or procedures, or evaluating results; a fixed quantity or quality.

Supplemental Training. Training for a portion of an AFS without a change in AFSC. Formal training on new equipment, methods, and technology that are not suited for on-the-job training.

Total Force. All collective Air Force components (active duty, reserve, guard, and civilian elements) of the United States Air Force.

Training Capacity. The capability of a training setting to provide training on specified requirements, based on the availability of resources.

Training Planning Team (TPT). Comprised of the same personnel as a U&TW; however, TPTs are more intimately involved in training development and the range of issues is greater than is normal in the U&TW forum.

Training Requirements Analysis. A detailed analysis of tasks for a particular AFS to be included in the training decision process.

Upgrade Training (UGT). Identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 3-, 5-, 7-, and 9-skill levels.

Utilization and Training Workshop (U&TW). A forum of the AFCFM, MAJCOM Functional Managers (MFMs), Subject Matter Experts (SMEs), and AETC training personnel that determines career ladder training requirements.

PART I

Section A - General Information

4. Purpose. This CFETP provides the information necessary for Air Force Career Field Managers (AFCFM), MAJCOM Functional Managers (MFM), commanders, training managers, supervisors and trainers, to plan, develop, manage, and conduct an effective career field training program. This plan outlines the training that individuals in the AFS should receive in order to develop and progress throughout their career. This plan identifies initial skills, upgrade, qualification, advanced, and proficiency training. **Initial skills training** is the AFS specific training an individual receives upon entry into the Air Force or upon retraining into this specialty for award of the 3-skill level. Normally, this training is conducted by AETC at one of the technical training centers. **Upgrade training** identifies the mandatory courses, task qualification requirements, and correspondence course completion requirements for award of the 3-, 5-, 7-, 9-skill level. **Qualification training** is actual hands-on task performance training designed to qualify an airman in a specific duty position. This training program occurs both during and after the upgrade training process. It is designed to provide the performance skills and knowledge required to do the job. **Advanced Training** is formal specialty training used for selected Airmen. **Proficiency training** is additional training, either in-residence or exportable advanced training courses, or on-the-job training provided to personnel to increase their skills and knowledge beyond the minimum required for upgrade. The CFETP has several purposes--some are:

4.1. Serves as a management tool to plan, manage, conduct, and evaluate a career field training program. Also, it is used to help supervisors identify training at the appropriate point in an individual's career.

4.2. Identifies task and knowledge training requirements for each skill level in the specialty and recommends education and training throughout each phase of an individual's career.

4.3. Lists training courses available in the specialty, identifies sources of training, and training delivery methods.

4.4. Identifies major resource constraints that impact full implementation of the desired career field training process.

5. Uses. The plan will be used by MFMs and supervisors at all levels to ensure comprehensive and cohesive training programs are available for each individual in the specialty.

5.1. AETC training personnel will develop or revise formal resident, nonresident, field and exportable training based upon requirements established by the users and documented in Part II of the CFETP. They will also work with the AFCFM, Air Force Civil Engineer Support Agency Force Development Division (HQ AFCEA/CEOF), to

develop acquisition strategies for obtaining resources needed to provide the identified training.

5.2. MFMs will ensure their training programs complement the CFETP mandatory initial, upgrade, and proficiency requirements. OJT, resident training, contract training, CerTest, or exportable courses can satisfy identified requirements. MAJCOM-developed training to support this AFS must be identified for inclusion into the plan.

5.3. Unit Education and Training managers and supervisors must ensure each individual completes the mandatory training requirements (including MAJCOM supplemental requirements) for the upgrade training specified in this plan.

5.4. Each individual will complete the mandatory training requirements specified in this plan. The lists of courses in Part II will be used as a reference to support training.

6. Coordination and Approval. The AFCFM is the approval authority for the CFETP. Also, the AFCFM will initiate an annual review of this document to ensure currency and accuracy. MAJCOM representatives and AETC personnel will identify and coordinate on the career field training requirements. Using the list of courses in Part II, they will eliminate duplicate training.

Section B - Career Field Progression and Information

7. Specialty Description.

7.1. Specialty Summary. Constructs and maintains concrete and asphalt runways, aircraft parking aprons, and roads. Operates and maintains heavy construction equipment such as, loaders, graders, dozers, backhoes, and dump trucks. Operates tractor-trailer combinations, transporting construction equipment, and materials. Ensures compliance with all safety and environmental regulations. Related DoD Occupational Subgroup: 710.

7.2. Duties and Responsibilities.

7.2.1. Plans, constructs, and repairs airfield pavements, roadways, streets, curbs, surface mats, membranes, and other improved areas using paving and surfacing procedures. Takes soil, aggregate, asphalt, and concrete samples for laboratory tests. Interprets construction drawings and surveys using information such as sub-grade contours and grade alignment. Inspect pavements for surface, base, and sub-base damage or defects. Repairs damaged or defective areas by removing and replacing joint and crack sealant, surface overlays, and seal coats. Determines material and equipment requirements and prepares cost estimates for construction activities. Performs erosion control.

7.2.2. Determines type and application of equipment to use in various construction, maintenance, and repair operations. Operates construction equipment to finish grade, level, slope, and compact construction materials. Operates snow and ice removal equipment. Applies chemicals and other ice control products.

7.2.3. Inspects, lubricates, and performs operator maintenance on construction and snow removal equipment. Adjusts and changes attachments on equipment. Connects and repairs wire rope rigging to cable-operated equipment. Schedules and coordinates equipment repair and servicing with the vehicle maintenance activity and other servicing facilities.

7.2.4. Investigates proposed work sites to determine resource requirements. Applies engineered performance standards to plan and estimate jobs. Coordinates and plans work requirements with other civil engineering and base agencies. Inspects work to ensure quality and compliance with policies, regulations, and other publications.

7.2.5. Designs demolition projects, places and detonates explosives. Performs quarry demolition, clearing and base denial operations as required. Operates water well drilling, rock crushing equipment, and fixed and mobile concrete and asphalt batch plants.

8. Skill and Career Progression. Adequate training and timely progression from the apprentice to the superintendent level play an important role in the Air Force's ability to accomplish its mission. It is essential that everyone involved in training must do his or her part to plan, manage, and conduct an effective training program. The guidance provided in this part of the CFETP will ensure each individual receives viable training at appropriate points in their career.

8.1. Apprentice (3-Level).

8.1.1. Upon completion of initial skills training, a trainee will work with a trainer to enhance their knowledge and skills to progress to the 5-level.

8.1.2. Utilize the Career Development Course (CDC), Air Force Qualification Training Packages (AFQTPs) and other exportable courses for subject and task fundamentals in the career field. Successfully complete applicable CerTests.

8.1.3. Once trained and task certified, a trainee may perform the task unsupervised.

8.1.4. After all upgrade training requirements are completed, supervisors and Unit Education and Training Managers (UETM) coordinate upgrade procedures.

8.1.5. NOTE: All trainees are automatically enrolled in the Community College of the Air Force (CCAF) when awarded their primary AFSC.

8.2. Journeyman (5-Level).

8.2.1. 5-levels may be assigned job positions such as team leader, shift supervisor, and task trainer.

8.2.2. Enter into continuation training to broaden experience base and to advance to the 7-level.

8.2.3. Must complete, as a minimum, fifteen months OJT before award of the 5-level (nine months for re-trainees that were awarded a five level in a previous AFSC).

8.2.4. Attend the Airman Leadership School (ALS) after serving 48 months in the Air Force or selection to rank of SSgt (active duty only). Either the in-residence or correspondence course is required for Air National Guard/Air Force Reserve Command (ANG/AFRC) personnel.

8.2.5. Use CDCs and other reference material to prepare for Weighted Airman Performance Systems (WAPS) testing.

8.2.6. Continue pursuing a Community College of the Air Force (CCAF) degree.

8.2.7. After all upgrade training requirements are completed, supervisors and UETMs coordinate upgrade procedures.

8.3. Craftsman (7-Level).

8.3.1. A craftsman can expect to fill various supervisory and management positions such as shift leader, team chief, supervisor, or task certifier.

8.3.2. Completion of CE Common Core 7-level Distance Learning Course and 100% core/diamond task training is prerequisite to award of the 7-level.

8.3.3. Must complete, as a minimum, twelve months OJT before award of the 7-level (six months for re-trainees that were awarded a seven level in a previous AFSC).

8.3.4. Seven-levels should take continuation training courses or obtain additional knowledge on management of resources and personnel.

8.3.5. Continue academic education through CCAF and higher degree programs is encouraged.

8.3.6. Attend the Noncommissioned Officer Academy (NCOA) after promotion to TSgt (active duty only). Either the in-residence or correspondence course is required for Air National Guard/Air Force Reserve Command (ANG/AFRC) personnel.

8.3.7. After all upgrade training requirements are completed, supervisors and UETMs coordinate upgrade procedures.

8.4. Superintendent. (9-Level)

8.4.1. A 9-level can be expected to fill positions such as flight chief, zone superintendents, and various staff positions.

8.4.2. Must be a SMSgt for award of the 9-skill level.

8.4.3. Completion of Civil Engineer Superintendent Course (AFIT WMGT 570) is highly recommended prior to award of the 9-skill level.

8.4.4. Should pursue increased knowledge of budget, manpower, resources, and personnel management.

8.4.5. After completion of CCAF, recommend the pursuit of additional higher education and completion of courses outside of their career AFS.

8.4.6. Will attend the Senior Noncommissioned Officer Academy (SNCOA) after selection for promotion to SMSgt (active duty only). A percentage of top nonselects

(for promotion to E-8) MSgts attend SNCOA each year. Either the in-residence or correspondence course is required for Air Force Reserve and Air National Guard (ANG).

8.5. Civil Engineer Manager (CEM).

8.5.1. CEMs work in a variety of similar jobs and functional areas where general managerial and supervisory abilities can be most effectively used and challenged.

8.5.2. Must be selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, or 3E691).

8.5.3. Resident graduation of the USAF Senior NCO Academy (SNCOA) is a prerequisite for CMSgt sew-on (active duty only). Either the in-residence or correspondence course is required for Air National Guard/Air Force Reserve Command (ANG/AFRC) personnel.

8.5.4. Completion of the Chief Leadership Course is mandatory.

9. Training Decisions. The CFETP uses a building block approach (simple to complex) to encompass the entire spectrum of training requirements for the Pavements and Construction Equipment Operator career field. The spectrum includes a strategy for when, where, and how to meet the training requirements. The strategy must be apparent and affordable to reduce duplication of training and eliminate a disjointed approach to training. The following decisions were made at the career field Utilization & Training Workshop held at Ft Leonard Wood, MO in November 2004.

9.1. Initial Skills Training. The initial skill course was reviewed for content. Additions, deletions, and modifications were made to the course. Wartime training tasks were identified. Additional contingency training was also identified.

9.2. Five Level Upgrade Training Requirements. Existing CDCs were reviewed and updated to ensure only current material remained and new technology information was added.

9.3. Seven Level Upgrade Training Requirements. 7-level training requirements were reviewed. Civil Engineering common 7-level training was discontinued in favor of AFSC specific 7-level training. Funding constraints preclude the implementation of AFSC specific resident 7-level at this time.

9.4. Proficiency Training. Any additional knowledge and skill requirements that were not taught through initial skills or upgrade training are assigned as continuation training. Purpose of continuation training is to provide training exceeding minimum upgrade training requirements with emphasis on present and future duty positions. MAJCOMs must develop a continuation-training program that ensures personnel in the Pavements and Construction Equipment Operator career field receive the necessary

training at the appropriate point in their careers. The training program will identify both mandatory and optional training requirements.

9.5. Supplemental Training. Subject Matter Experts (SME) and the Training Committee reviewed supplemental training courses for technical accuracy and identified training that was no longer required. They revalidated the remaining courses as necessary to fully support career progression in the AFS.

9.6. CerTest. Originally, the CerTest program was developed to support transition training and meet DoD certification requirements. Now, it is also the singular platform to launch AFQTP tests and supplement the evaluation of OJT.

10. Community College of the Air Force (CCAF) Academic Programs. Enrollment in CCAF occurs upon completion of Basic Military training. CCAF provides the opportunity to obtain an Associate in Applied Sciences Degree. In addition to its associates degree program, CCAF offers the following:

10.1. Occupational Instructor Certification. Upon completion of instructor qualification training (consisting of the instructor methods course and supervised practice teaching), CCAF instructors who possess an associates degree or higher may be nominated by their school commander and commandant for certification as an occupational instructor.

10.2. Trade Skill Certification. When a CCAF student separates or retires, a trade skill certification is awarded for the primary occupational specialty. The College uses a competency-based assessment process for trade skill certification at one of four proficiency levels: Apprentice, Journeyman, Craftsman (Supervisor), or Master Craftsman (Manager). All are transcribed on the CCAF transcript.

11. Degree Requirements. The **Construction Technology Associates Degree (4VEB)** applies to this AFSC. All Airmen are automatically entered into the CCAF program. Prior to completing an associate degree, the 5-level must be awarded and the following requirements must be met:

Course	Semester Hours
Technical Education.....	24
Leadership, Management, and Military Studies.....	6
Physical Education.....	4
General Education.....	15
Program Elective.....	15
Technical Education; Leadership, Management, and	

Military Studies; or General Education

Total..... **64**

11.1. Technical Education (24 Semester Hours): A minimum of 12 semester hours of Technical Core subjects and courses must be applied and the remaining semester hours applied from Technical Core or Technical Elective subjects and courses.

**Technical Core Requirements
Hours**

**Maximum Semester
Hours**

Building Construction and Design.....	20
Carpentry/Cabinetry	12
CCAF Internship.....	18
College Algebra/Trigonometry.....	3
Computer Aided Drafting.....	3
Construction Inspection/Building Codes.....	9
Drafting/Engineering Drawing.....	3
Engineering Assistant.....	20
Heavy Equipment Operations.....	20
Metals Fabrication/Characteristics.....	15
Pavement Construction.....	12
Project Management/Planning.....	3
Surveying.....	9
Welding.....	9

Technical Electives

Maximum Semester Hours

Blueprint Reading.....	3
Computer Science.....	6
Construction Material Estimating.....	3
Enlisted Professional Military Education	6
General Physics.....	3
Hazardous Materials.....	3
Industrial/Construction Safety.....	3
Properties and Strength of Materials.....	6
Soil and Foundations.....	3
Technical Writing.....	3

11.2. Leadership, Management, and Military Studies (6 Semester Hours): Professional military education, civilian management courses accepted in transfer and/or by testing credit.

11.3. Physical Education (4 Semester Hours): This requirement is satisfied by completion of Basic Military Training.

11.4. General Education (15 Semester Hours): Applicable courses must meet the criteria for application of courses to the general education requirements and be in agreement with the definitions of applicable general education subjects/courses as provided in the *CCAF General Catalog*.

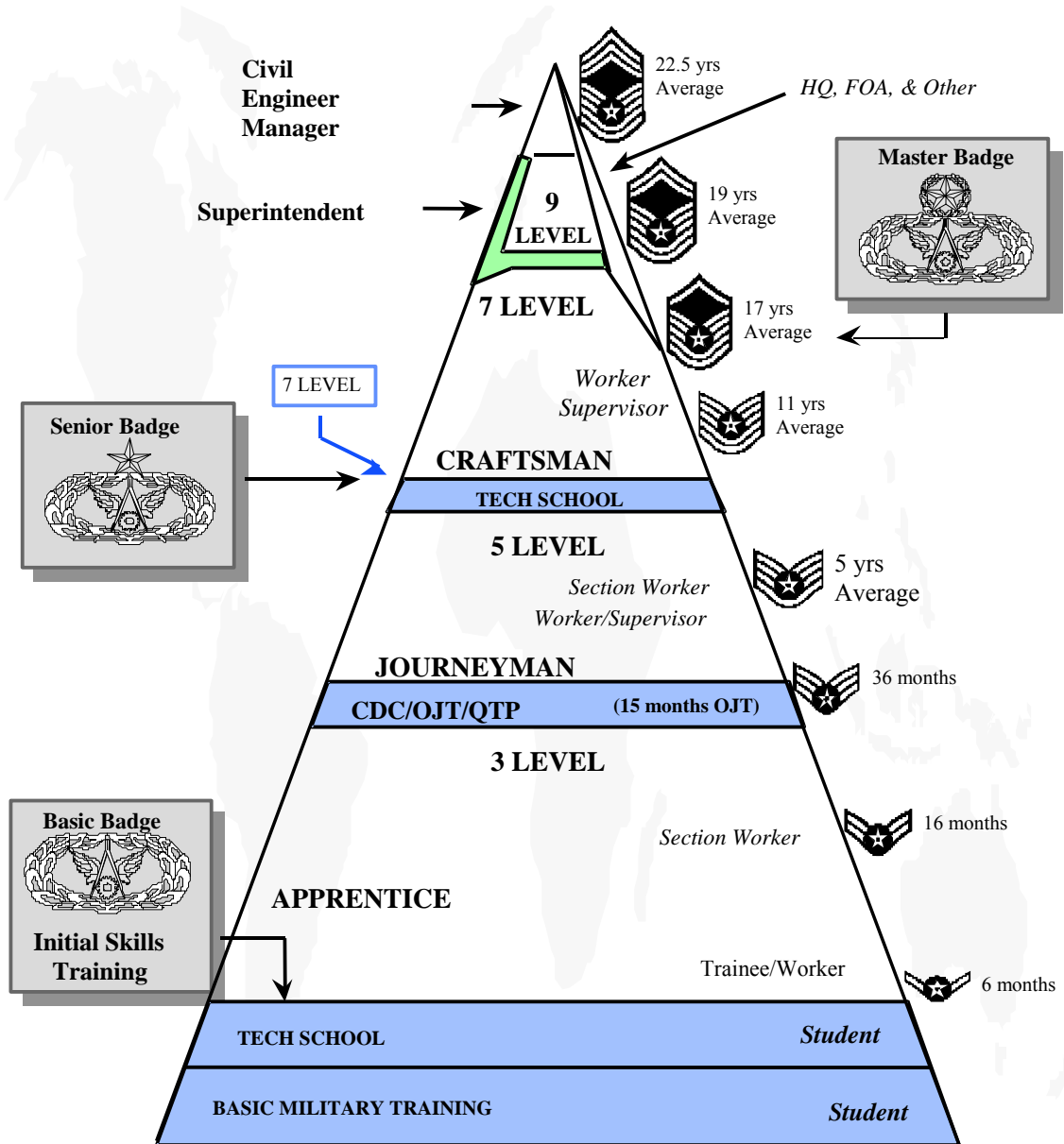
General Education Subjects/Courses Hours	Semester
Oral Communication.....	3
Speech	
Written Communication.....	3
English Composition	
Mathematics.....	3
An intermediate algebra or a college-level mathematics course that satisfies the delivering institution's mathematics requirement for graduation. If an acceptable mathematics course is applied as a technical or program elective, a natural science course may be substituted for mathematics.	
Social Science.....	3
Anthropology, archaeology, economics, geography, government, history, political science, psychology, and sociology	
Humanities.....	3
Fine arts (criticism, appreciation, historical significance), foreign language, literature, philosophy, and religion.	

11.5. Program Elective (15 Semester Hours): Satisfied with applicable technical education, Leadership, Management, and Military Studies (LMMS), or general education requirements; Natural science courses meeting the general education requirement application criteria; Foreign language credit earned at Defense Language Institute or through Defense Language Proficiency Test; Maximum of six semester hours of CCAF degree-applicable technical course credit otherwise not applicable to this program may be applied. See the *CCAF General Catalog* for details regarding the Associates of Applied Sciences degree for this specialty.

11.6. Additional off-duty education is a personal choice that is encouraged for all. Individuals desiring to become an AETC Instructor should be actively pursuing an associate degree. A degreed faculty is necessary to maintain accreditation through the Southern Association of Colleges and Schools.

12. Career Field Path. The following chart depicts this specialty's career path.

Enlisted Career Pyramid



12.1 Enlisted Career Path				
Education and Training Requirements	GRADE REQUIREMENTS			
	Rank	Average Sew-On	Earliest Sew-On	High Year Of Tenure (HYT)
Basic Military Training school				
Apprentice Technical School (3-Skill Level)	Amn A1C	6 months 16 months		
Upgrade To Journeyman (5-Skill Level) - Minimum 15 months on-the-job training. (9 months for retrainees) - Complete 5-level CDC - Complete all core and duty related tasks identified in CFETP	SRA	3 years	28 months (22 Months BTZ)	12 Years
Airman Leadership School - Must be a SrA with 48 months time in service or be a SSgt Selectee. - Resident graduation is a prerequisite for SSgt sew-on (Active Duty Only).	<u>Trainer</u> - Must be qualified and certified to the perform tasks to be trained. - Must attend formal OJT Trainer Training.			
Upgrade To Craftsman (7-Skill Level) - Minimum rank of SSgt. - 12 months OJT. - 6 months OJT for retrainees - Complete 7-level ADL. - Complete all core and duty related tasks identified in CFETP	SSgt	5 years	3 years	20 Years
	<u>Certifier</u> - SSgt with 5-skill level or civilian equivalent. - Attend formal OJT Certifier Course. - Be a person other than the trainer (for core and critical tasks only).			
Noncommissioned Officer Academy - Must be a TSgt or TSgt Selectee. - Resident graduation is a prerequisite for MSgt sew-on (Active Duty Only).	TSgt	11 years	5 years	24 Years
	MSgt	17 years	8 years	26 Years
USAF Senior NCO Academy - Must be a SMSgt, SMSgt Selectee, or selected MSgt - Resident graduation is a prerequisite for CMSgt sew-on (Active Duty Only)				28 Years
Upgrade To Superintendent (9-Skill Level) - Minimum rank of SMSgt. - Complete AFIT WMGT 570, Civil Engineer Superintendent Course.	SMSgt	19 years	11 years	
Civil Engineer Manager (CEM) - Completion of Chief Leadership course is Mandatory	CMSgt	22.5 years	14 years	30 Years

12.2. CE Occupational Badge. The Civil Engineer badge reflects a great history and tradition. By wearing it, you will be recognized by your fellow Airmen as having achieved an expected level of competence. The multitude of engineers before you established this expectation through excellent service in both peace and war. Eligibility criteria for award and wear of AF occupational badges can be found in AFI 36-2923 *Aeronautical, Duty, and Occupational Badges*.

12.2.1. CE Badge Heraldry. The gear wheel and compass have historically been used to represent the engineering profession, in both the military and civilian sector. The gear represents the essence of engineering: applying scientific principles and technology to practical ends. To Air Force engineers, the gear symbolizes an element (representing the built environment) that meshes with other environments (weapon systems and trained personnel) to enable the Air Force to perform its mission. The compass is a precision tool historically used by engineers in designing and constructing facilities and equipment. The gear and compass together symbolize all the diverse specialties within Air Force civil engineer. Finally, the wings help to portray the fundamental linkage between the engineering and aviation components; and that the built environment is the foundation supporting Air Force mission and people.

12.2.2. Basic Badge. The basic badge is awarded upon successful completion of the apprentice course.

12.2.3. Senior Badge. The senior badge adds a star to the top of the badge. Wear the senior badge after award of the 7-skill level.

12.2.4. Master Badge. The master badge adds a wreath around the star. The Master Badge is awarded to master sergeant or above with 5 years in the specialty from award of the 7-skill level.

Section C - Skill Level Training Requirements

13. Purpose. Skill level training requirements in this specialty are defined in terms of tasks and knowledge requirements. This section outlines the specialty qualification requirements for each skill level in broad, general terms and establishes the mandatory requirements for entry, award, and retention of each skill level. The specific task and knowledge training requirements are identified in the STS at Part II, Section A and B, of this CFETP.

14. Specialty Qualification.

14.1. Apprentice (3-Level) Training Requirements.

14.1.1. Specialty Qualification.

14.1.1.1. Knowledge. Knowledge is mandatory of characteristics, capabilities, operation, and maintenance of equipment used in construction and paving; soil types, properties, limitations, and compaction methods; soil stabilization, drainage, and erosion control; construction and maintenance of asphalt and concrete surfaces; roadways; structure erection; landscaping; safety and environmental concerns; and pavement maintenance plans. Completion of the Pavements and Construction Equipment Operator Apprentice course satisfies these requirements.

14.1.1.2. Education. Completion of high school or a General Education Development (GED) is mandatory for entry into this AFS. Courses in general science, shop mechanics, and use of drawings is desirable.

14.1.1.3. Training. Completion of the Pavements and Construction Equipment Operator Apprentice course is mandatory for award of this skill level.

14.1.1.4. Experience. N/A

14.1.1.5. Other. Normal color vision as defined in AFI 48-123, *Medical Examination and Standards*, is mandatory for entry into AFSC. Qualification to operate government vehicles according to AFI 24-301, *Vehicle Operations*, is mandatory for entry into AFSC.

14.1.2. Training Sources and Resources.

14.1.2.1. Formal training is accomplished through the Pavements and Construction Equipment Operator Apprentice course at Ft Leonard Wood MO.

14.1.2.2. The Course Objective List (COL) (Part II, Section B of this CFETP) identifies all the knowledge and tasks, with their respective standards.

14.1.2.3. When available, AFQTPs and applicable CerTests are mandatory for use during UGT/QT on all core tasks, critical tasks, and diamond (□) tasks.

14.1.3. Implementation.

14.1.3.1. The 3-skill level is awarded upon graduating the Apprentice course.

14.2. Journeyman (5-Level) Training Requirements.

14.2.1. Specialty Qualification.

14.2.1.1. Knowledge. Knowledge is mandatory of characteristics, capabilities, operation, and maintenance of equipment used in construction and paving; soil types, properties, limitations, and compaction methods; soil stabilization, drainage, and erosion control; construction and maintenance of asphalt and concrete surfaces; roadways; structure erection; landscaping; safety and environmental concerns; pavement maintenance plans; basic surveying; earth leveling, grading, filling, and compaction; strength and characteristics of ropes, wires, and cables; techniques for lifting and moving heavy objects by machine and mechanical advantage; characteristics of pavement surfacing materials; techniques for installing and repairing asphalt and concrete pavements; use, installation, and repair of airfield mats and membranes; aircraft revetments; environmental concerns and safety precautions required when using and storing hazardous materials.

14.2.1.2. Education. N/A

14.2.1.3. Training. The following training is mandatory for award of the 5-skill level:

14.2.1.3.1. Completion of 5-skill level CDCs.

14.2.1.3.2. Certification of all 5-level core tasks identified with a single asterisk (*) in the 5-level core task column of the STS.

14.2.1.3.3. Completion of AFQTPs for assigned core tasks and contingency war diamond (□) tasks.

14.2.1.3.4. Completion of CerTests for all contingency war diamond (□) tasks with a minimum of 80%.

14.2.1.3.5. Certification of duty position requirements identified by the supervisor.

14.2.1.3.6. The following training is desirable and strongly encouraged:

14.2.1.3.6.1. Completion of the Pavements Maintenance, Inspection, and Repair MTT course.

14.2.1.3.6.2.. Completion of Regional Equipment Operator Training Site (REOTS) course.

14.2.1.3.6.3. Completion of courses/training could lead to the award of a Commercial Drivers License (CDL). Check with your state licensing office.

14.2.1.4. Experience.

14.2.1.4.1. Qualification in and possession of 3-skill level.

14.2.1.4.2. Minimum 15 months on-the-job training (9 months for re-trainees).

14.2.1.5. Other. For entry, award, and retention of these AFSCs, qualification to operate a government vehicle according to AFI 24-301, *Vehicle Operations*

14.2.2. Training Sources and Resources.

14.2.2.1. CDC 3E251, Pavements and Construction Equipment Operator Journeyman.

14.2.2.2. The STS (Part II, Section A of the CFETP) identifies all core tasks required for qualification in the individual's duty position.

14.2.2.3. Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

14.2.2.4. Pavements Maintenance, Inspection and Repair MTT course.

14.2.2.5. Regional Equipment Operator Training Site (REOTS) course.

14.2.3. Implementation. Entry into 5-level upgrade training is initiated after the individual has completed the 3-level school and been assigned to their first duty station. Qualification training is initiated any time individuals are assigned duties they are not certified to perform. AFQTPs are used concurrently to obtain necessary duty position qualifications.

14.3. Craftsman (7-Level) Training Requirements.

14.3.1. Specialty Qualification.

14.3.1.1. Knowledge. Knowledge is mandatory of characteristics, capabilities, operation, and maintenance of equipment used in construction and paving; soil types, properties, limitations, and compaction methods; soil stabilization, drainage, and erosion control; construction and maintenance of asphalt and concrete surfaces; roadways; structure erection; landscaping; safety and environmental concerns; pavement maintenance plans; basic surveying; earth leveling, grading, filling, and compaction; strength and characteristics of ropes, wires, and cables; techniques for lifting and moving heavy objects by machine and mechanical advantage; characteristics of pavement surfacing materials; techniques for installing and repairing asphalt and concrete pavements; use, installation, and repair of airfield mats and membranes; aircraft revetments; environmental concerns and safety precautions required when using and storing hazardous materials.

14.3.1.2. Education.

14.3.1.2.1. Completion of the CE 7-level Common Core Distance Learning Module is mandatory.

14.3.1.2.2. To assume the grade of SSgt, individuals must successfully complete Airman Leadership School (active duty only).

14.3.1.2.2. To assume the grade of MSgt, individuals must successfully complete the NCO Academy (active duty only).

14.3.1.2.3. For ANG/AFRC, completion of Air Force Institute for Advanced Distributive Learning (AFIADL) courses 00001 (ALS) and 00006 D&E (NCO Academy) satisfy the requirements.

14.3.1.3. Training. The following training is mandatory for award of the 7-skill level:

14.3.1.3.1. Certification of all 5 and 7-skill level core tasks identified with a single asterisk (*) in the 5-level core task column and double asterisk (**) in the 7-level core task column of the STS.

14.3.1.3.2. Completion of all AFQTPs for assigned core and diamond (□) tasks

14.3.1.3.4. Completion of CerTests for all diamond (□) tasks with a minimum of 80%.

14.3.1.3.5. Certification of duty position requirements identified by the supervisor.

14.3.1.3.6. ANG/AFRC only, completion of Regional Equipment Operator Training Site (REOTS) course every 3 years.

14.3.1.3.7. The following training is desirable and strongly encouraged

14.3.1.3.7.1. Completion of the Pavements Maintenance, Inspection, and Repair MTT course.

14.3.1.3.7.2. Active duty only, completion of Regional Equipment Operator Training Site (REOTS) course.

14.3.1.4. Experience.

14.3.1.4.1. Qualification in and possession of a 5-level

14.3.1.4.2. Must be SSgt with minimum 12 months on-the-job training (6 months for re-trainees).

14.3.1.5. Other. For entry, award, and retention of these AFSCs, qualification to operate a government vehicle according to AFI 24-301, *Vehicle Operations*.

14.3.2. Training Sources and Resources.

14.3.2.1. CDC 3E251, Pavements and Construction Equipment Operator Journeyman.

14.3.2.2. The STS (Part II, Section A of this CFETP) identifies all core tasks required for qualification in the individual's duty position.

14.3.2.3. Qualified trainers provide upgrade and qualification training for duty positions, managed programs, and/or equipment to be used.

14.3.2.4. Pavements Maintenance, Inspection and Repair MTT course.

14.3.2.5. Regional Equipment Operator Training Site (REOTS) course.

14.3.3. Implementation. Entry into 7-level training is initiated when an individual is selected for SSgt and has fulfilled all 5-level requirements. Qualification training is initiated any time an individual is assigned duties that they are not certified to perform. AFQTPs are used concurrently to obtain necessary duty position qualifications.

14.4. Superintendent (9-Level) Training Requirements.

14.4.1. Specialty Qualification.

14.4.1.1. Knowledge. Knowledge is mandatory of Air Force training programs. CE policies, practices, and procedures of base maintenance and operations, crafts, facilities, equipment, and systems. Interpretations and applications of maintenance and work force management. General construction, maintenance, and repair of pavements, grounds drainage facilities, surface mats and membranes, and aircraft revetments. Standard soil test procedures. Construction administration procedures. Landscaping procedures.

14.4.1.2. Education.

14.4.1.2.1. ANG/AFRC must complete AFIADL course 00012 (computer base CD-ROM), course 00014 (Web-based), or in-residence Senior NCO Academy course prior to award of the 9-skill level.

14.4.1.2.2. Completion of AFIT WMGT 570 Civil Engineer Superintendent Course is highly recommended prior to award of 9-skill level.

14.4.1.3. Training. Completion of duty position training requirements is mandatory.

14.4.1.4. Experience.

14.4.1.4.1. Qualification in and possession of 7-skill level is mandatory.

14.4.1.4.2. Minimum rank of SMSgt with experience directing functions such as snow and ice removal, construction equipment operations, and pavements and grounds maintenance.

14.4.1.7. Other. For entry, award, and retention of these AFSCs, qualification to operate a government vehicle according to AFI 24-301, *Vehicle Operations*

14.4.2. Training Sources and Resources.

14.4.2.1. In-residence Senior NCO Academy located at Maxwell AFB - Gunter Annex AL.

14.4.2.2. Senior NCO Academy Course 00012 (exportable computer based CD-ROM) , or course 00014 (Web-based).

14.4.2.3. Civil Engineer Superintendent Course, WMGT 570, conducted at Air Force Institute of Technology, Wright-Patterson AFB, OH.

14.4.3. Implementation.

14.4.3.1. Entry into 9-level training is initiated when an individual is selected for SMSgt and is a fully qualified 7-Level. Qualification training

is initiated any time an individual is assigned duties they are not certified to perform.

14.5. Civil Engineer Manager.

14.5.1. Specialty Qualification.

14.5.1.1. Knowledge. Knowledge is mandatory of managing and directing personnel resource activities. Interpreting and enforcing policy and applicable directives. Establishing control procedures to meet work goals and standards. Recommending or initiating actions to improve operational efficiency. Planning and programming work commitments and schedules. Developing plans regarding facilities, supplies, and equipment procurement and maintenance.

14.5.1.2. Education. Must be a resident graduate of Senior NCO Academy (active duty only). Completion of the Chief Leadership Course is mandatory.

14.5.1.3. Training. N/A

14.5.1.4. Experience. Possess qualifications in feeder specialty (3E291) prior to award of Civil Engineer Manager code 3E000.

14.5.1.5. Other. For entry, award, and retention of these AFSCs, qualification to operate a government vehicle according to AFI 24-301, *Vehicle Operations*

14.5.2. Training Sources and Resources. Chief Leadership Course conducted at Maxwell AFB, AL

14.5.3. Implementation. Entry into Civil Engineer Manager code 3E000 is initiated when an individual is selected for CMSgt and possess qualifications in a feeder specialty (3E090, 3E191, 3E291, 3E391, 3E490, 3E591, and 3E691).

Section D - Resource Constraints

15. Purpose. This section identifies known resource constraints, which preclude optimal and desired training from being developed or conducted, including information such as cost and manpower. Narrative explanations of each resource constraint and an impact statement describing what effect each constraint has on training are included. Also included in this section are actions required, office of primary responsibility, and target completion dates. Resource constraints will be, as a minimum, reviewed and updated annually.

15.1. Apprentice Level Training. None

15.2. Journeyman Level Training. None

15.3. Craftsman Level Training. None

15.4. Superintendent Level Training. None.

Section E – Transitional Training Guide

16. There are currently no transition training requirements. This area is reserved.

Part II

Section A - Specialty Training Standard

1. Implementation. This STS will be used for technical training provided by AETC for classes beginning 22 March 06 and graduating 22 Jun 06.

2. Purpose. As prescribed in AFI 36-2201, this STS:

2.1. Lists in Column 1 (*Tasks, Knowledge, and Technical References*) the most common tasks, knowledge, and Technical References (TR) necessary for Airmen to perform duties in the 3-, 5-, and 7-skill level.

2.2. Column 2 (*Core Tasks*) identifies core tasks (specialty-wide training requirements) by an asterisk (*) in the 5-skill level column or a double asterisk (**) in the 7-skill level column. **As a minimum, trainees must complete hands-on certification on all core and critical tasks for skill-level upgrade.**

2.2.1. All tasks in the 3-level course column are considered wartime tasks. In response to a wartime scenario, these tasks will be taught in the 3-level course in a streamlined training environment.

2.2.2. Tasks identified by a diamond (♦) in column 2 are considered contingency tasks for both the 5- and 7-skill level and are extremely important to the career field. Equipment shortfalls at most locations however, have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training.

2.3. Provides **certification for OJT**. Column is used to record completion of task and knowledge training requirements. If available, and approved by the CE CFM, use automated training management systems to document technician qualifications. **Task certification** must show a training completion date and initials of the trainee, trainer, and certifier. All non-core tasks require training completion date and initials of the trainee and trainer only.

2.4. Shows **formal training and correspondence course** requirements. Column 4 shows the proficiency to be demonstrated on the job by the graduate as a result of training on the task and knowledge provided by the initial skills course and the career knowledge provided by the correspondence course. See CADRE/AFSC/CDC listing maintained by the unit education and training manager for current CDC listings.

2.5. Qualitative Requirements. **Attachment 1** contains the proficiency code key used to indicate the level of training and knowledge provided by resident training and career development courses.

2.6. Job Qualification Standard (JQS) for on-the-job training when placed in AF Form 623, Individual Training Record, and used according to AFI 36-2201. For OJT, the tasks in Column 1 are trained and qualified to the go/no go level. Go means the individual can perform the task without assistance and meets local requirements for accuracy, timeliness, and correct use of procedures. AFQTPs, when available, shall be used to identify Air Force standardized procedures. When used as a JQS, the following requirements apply:

2.6.1. Documentation. Document and certify completion of training.

2.6.1.1. Identify current duty position requirements by circling the subparagraph number or letter next to the task statement. Additionally, all core (* or **) and diamond (♦) identified tasks should be circled. Document task completion by annotating columns 3A, 3B, 3C, 3D and 3E, as appropriate.

NOTE: All entries shall be made in pencil.

2.6.1.2. Enter the start date of the AFQTP on the AFQTP documentation record. Once completed enter the completion date. When **hands-on** training is started and completed annotate the STS accordingly.

2.6.1.3. Transcribing from old document (paper or automated) to CFETP. Refer to AFI 36-2001, Volume 3, Para 7.8.2. for guidance.

2.6.1.4. Documenting Career Knowledge. When a CDC is not available, the supervisor identifies STS training references that the trainee requires for career knowledge IAW AFI 36-2201 Vol 3 and ensures, as a minimum, that trainees cover all mandatory items specified in AFMAN 36-2108, Enlisted Classification. For two-time CDC exam failures, the unit commander will take appropriate action IAW AFI 36-2201 Vol 3. **NOTE:** Career knowledge must be documented prior to submitting a CDC waiver.

2.6.1.5. Decertification and Recertification. When an airman is found to be unqualified on a task, the supervisor shall erase previous certification and enter airman into qualification training. Appropriate remarks are entered on the AF Form 623a, On-The-Job Training Record Continuation Sheet, as to the reason for decertification. The individual is recertified using the normal certification process.

2.7. The STS is a guide for development of promotion tests used in the Weighted Airman Promotion System (WAPS). Specialty Knowledge Tests (SKTs) are developed at the USAF Occupational Measurement Squadron by senior NCOs with extensive practical experience in their career fields. The tests sample knowledge of STS subject matter areas judged by test development team members as most appropriate for promotion to higher grades. Questions are based upon study references listed in the WAPS catalog. Individual responsibilities are in chapter 14 of AFI 36-2606, *United*

States Air Force Reenlistment, Retention, and NCO Status Programs. WAPS is not applicable to the Air National Guard or Air Reserve Forces.

3. Recommendations. Comments and recommendations are invited concerning the quality of training AETC graduates receive. Reference specific STS paragraphs and address correspondence regarding changes to 782 TRG/TGAV, 620 9th Avenue, Suite 3, Sheppard AFB TX 76311-2268. A customer service information line has been installed for the supervisor's convenience to identify graduates who may have received over or under training on task/knowledge items listed in this training standard. For a quick response to problems, call our customer service information line at DSN: 736-2574 or e-mail csil@sheppard.af.mil anytime day or night.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

OFFICIAL

L. DEAN FOX, Major General, USAF
The Civil Engineer
DCS/Installations and Logistics

2 Attachments

1. Qualitative Requirements
2. 3-, 5-, and 7-level career field training requirements

This Block Is For Identification Purposes Only		
Name Of Trainee		
Printed Name (Last, First, Middle Initial)	Initials (Written)	SSAN
Printed Name Of Certifying Official And Written Initials		
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	

QUALITATIVE REQUIREMENTS

Proficiency Code Key		
	Scale Value	Definition: The individual
Task Performance Levels	1	Can do simple parts of the task. Needs to be told or shown how to do most of the task. (Extremely Limited)
	2	Can do most parts of the task. Needs only help on hardest parts. (Partially Proficient)
	3	Can do all parts of the task. Needs only a spot check of completed work. (Competent)
	4	Can do the complete task quickly and accurately. Can tell or show others how to do the task. (Highly Proficient)
*Task Knowledge Levels	a	Can name parts, tools, and simple facts about the task. (Nomenclature)
	b	Can determine step by step procedures for doing the task. (Procedures)
	c	Can identify why and when the task must be done and why each step is needed. (Operating Principles)
	d	Can predict, isolate, and resolve problems about the task. (Advanced Theory)
**Subject Knowledge Levels	A	Can identify basic facts and terms about the subject. (Facts)
	B	Can identify relationship of basic facts and state general principles about the subject. (Principles)
	C	Can analyze facts and principles and draw conclusions about the subject. (Analysis)
	D	Can evaluate conditions and make proper decisions about the subject. (Evaluation)
<u>Explanations</u> * A task knowledge scale value may be used alone or with a task performance scale value to define a level of knowledge for a specific task. (Example: b and 1b) ** A subject knowledge scale value is used alone to define a level of knowledge for a subject not directly related to any specific task, or for a subject common to several tasks. - This mark is used alone instead of a scale value to show that no proficiency training is provided in the course or CDC. X This mark is used alone in the course columns to show that training is required but not given due to limitations in resources. NOTE: All tasks and knowledge items shown with a proficiency code are trained during war time.		

This Block Is For Identification Purposes Only		
Name Of Trainee		
Printed Name (Last, First, Middle Initial)	Initials (Written)	SSAN
Printed Name Of Certifying Official And Written Initials		
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	
N/I	N/I	

QUALITATIVE REQUIREMENTS

Behavioral Statement STS Coding System	
Code	Definition
K	Subject Knowledge Training - The verb selection identifies the individual's ability to identify facts, state principles, analyze, or evaluate the subject
P	Performance Training - Identifies that the individual has performed the task to the satisfaction of the course; however, the individual may not be capable of meeting the filed requirements for speed and accuracy.
Pk	Performance Knowledge Training - The verb selection identifies the individual's ability to relate simple facts, procedures, operating principles, and operational theory for the task.
-	No training provided in the course or CDC.
X	Training is required but not provided due to limitations in resources.
Each STS element is written as a behavioral statement. The detail of the statement and verb selection reflects the level of training provided by resident training and career development courses.	

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Skill Level		5 Skill Level		7 Skill Level		Tng Start		Tng Complete		Trainee Initials		Trainer Initials	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
1. CE ORGANIZATION AND CAREER FIELD STRUCTURE TR: AFDD 2-4.2; AFIs 10-209, 10-210, 10-211, 32-1022, 36-2101, 38-101, 51-903; AFMAN 36-2108; AFPAM 32-1004, Vol 1-6; War Mobilization Plan (WMP)-1, Annex S														
1.1 Base Civil Engineer (BCE) structure											A		B	
1.2 Progression in career ladder											A		B	
1.3 Duties and responsibilities														
1.3.1 Peacetime											A		B	
1.3.2 Contingency											A		B	
1.4 Functions of:														
1.4.1 BCE											A		B	
1.4.2 Prime BEEF											A		B	
1.4.3 RED HORSE											A		B	
1.4.4 HQ ANG/AFRC											A		B	
1.4.5 HQ AFCESA													A	B
1.4.6 HQ AFCEE														A
1.4.7 AFIT														A
1.4.8 AFRL														A
1.5 Resources														
1.5.1 Assess manpower requirements														b
1.5.2 Identify budget requirements														b
1.5.3 Determine equipment requirements														b
1.5.4 Use Allowance Standards (AS)														b
1.5.5 Research, Development, and Acquisition (RD&A) TR:AFI 63-118														
1.5.5.1 Process														B
1.5.5.2 Unit responsibilities														B
1.5.5.3 Major command responsibilities														B
1.5.6 Assess vehicle requirements														b
1.5.7 Requesting contract services														b
1.5.8 Requesting Simplified Acquisition of Base Engineering Requirements (SABER) contract														B
1.5.9 Geo Base technologies													B	B
1.5.10 Quality Assurance Personnel (QAP) duties TR: Federal Acquisition Regulation Part 37.6; AFI 63-124; AFPAM 32-1004 V2														
1.5.10.1 Evaluate contractor's performance														
1.5.10.2 Document contractor's performance														
1.5.10.3 Maintain surveillance documents														
2 Supervision TR: AFMAN 36-2108; AFIs 36-2201, 36-2403, 36-3104; AFPAM 36-3627 AFP 35-49; DoDD 5500-7														

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
2.1 Orient new personnel														b
2.2 Assign personnel to work crew														b
2.3 Coordinate work assignments														b
2.4 Schedule work assignments and priorities														b
2.5 Establish:														
2.5.1 Work methods														b
2.5.2 Controls														b
2.5.3 Performance standards														b
2.6 Evaluate work performance of subordinate personnel														b
2.7 Resolve technical problems for subordinate personnel														b
2.8 Direct projects														b
3 Training TR: AFIs 36-2101, 36-2201; 36-2202; AFMAN 36-2108; AF Education & Training Course Announcements (ETCA)														
3.1 Evaluate personnel to determine need for training												a		b
3.2 Enlisted specialty training supervision														
3.2.1 Prepare job qualification standards												a		b
3.2.2 Conduct training												a		b
3.2.3 Counsel trainees on their progress												a		b
3.2.4 Monitor training effectiveness														
3.2.4.1 Career knowledge												a		b
3.2.4.2 Job proficiency upgrade												a		b
3.2.4.3 Qualification												a		b
3.3 Maintain training records												a		b
3.4 Evaluate training programs effectiveness												a		b
3.5 Recommend people for training												a		b
3.6 AETC training management system (Training Allocation)												A		B
3.7 Managing Certification and Testing (CerTest)												A		B
3.8 National/DoD Certification requirements												A		B
3.9 AFQTP Requirements												A		B
4 Environmental Awareness and Compliance TR: AFI 32-4002, 32-7045, 32-7061; Chemicals in Your Community (EPA 550-K-93-003); EO 12856														
4.1 Environmental compliance (ECAMP, ESOH)												A		B
4.2 Environmental Protection Agency (EPA)												A		B
5 CE Management TR: AFI 32-1031, 32-1022; AFPAM 32-1098, AFMAN 23-110														
5.1 Customer relationships										A		B		B

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
5.2 Work identification and authorization												A		B
5.3 Plan work requirements												A		B
5.4 Plan logistics support (CEMAS, BOM)												A		B
5.5 GPC Program												A		B
5.6 Maintain recurring work program (RWP)												A		B
5.7 Scheduling/time accounting												A		B
5.8 Warranty/Guarantee Program												A		B
5.9 Property accountability												A		B
5.10 Air Force Comprehensive Plan												A		B
5.11 Legal limits												A		B
5.12 Mark "As Built" drawings												A		B
5.13 Reimbursements procedures												A		B
5.14 CE Specific Automated Systems (Computer) Capability														
5.14.1 Perform inputs												a		b
5.14.2 Maintain files												a		b
5.14.3 Develop automated reports												a		b
5.14.4 Extract automated reports												a		b
5.14.5 Perform automated data analysis														b
5.15 Host Tenant and Interservice Agreements														A
5.16 Civil Engineer Civilian Management														B
6 AF Occupational Safety and Health (AFOSH) Program TR: AFOSH STDs 91-301, 91-302, 91-501														
6.1 Supervisory responsibilities												B		
6.2 Hazardous materials waste handling												B		
6.3 Lead-based paint (LBP) hazard TR: 29 CFR 1926.62; Working with Lead-based Paint: Facts and Information Applicable to Air Force Facilities												B		
6.4 Asbestos awareness												B		
7 Publications														
7.1 Military										A		B		
7.2 Commercial										A		B		
7.3 Engineering Technical Letters (ETL)												A		B
8 Communications TR: AFI 33-106; AFJMAN 24-306														
8.1 Use radios		*							2b					
8.2 Use hand signals		*							b					
8.3 Identify airdrome signals									b					
9 AFS Specific Safety TR: AFPDs 91-2, 91-3; AFI 91-302; AFIND 17														
9.1 Use protective equipment such as:														
9.1.1 Eye protectors									2b			B		
9.1.2 Ear protectors									2b			B		
9.1.3 Safety helmets									2b			B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
9.1.4 Respirators									A			B		
9.1.5 Gloves									2b			B		
9.1.6 Safety shoes									2b			B		
9.1.7 Seat belts									2b			B		
9.2 Cardiopulmonary resuscitation (CPR)														
9.3 "Employ" safety principles when:														
9.3.1 Getting on/off equipment									2b			B		
9.3.2 Starting/stopping engines									2b			B		
9.3.3 Placing equipment in motion									2b			B		
9.3.4 Operating in hazardous conditions									B			B		
9.3.5 Servicing equipment									2b			B		
9.3.6 Loading equipment									a			B		
9.3.7 Unloading equipment									a			B		
9.3.8 Hauling equipment									a			B		
9.3.9 Adjusting equipment									2b			B		
9.3.10 Loading material									2b			B		
9.3.11 Unloading material									2b			B		
9.3.12 Hauling material									2b			B		
9.4 Electrical hazards and precautions									B			B		
9.5 Initial Federal Hazard Communication Training Program (FHCTP) TR: DoD 6050.5-G-1; 29 CFR 1910.1200; AFI 91-302									A					
9.6 Construction safety														
9.6.1 Traffic control									A			B		
9.6.2 Worksite safety									A			B		
9.7 Confined space health hazards														
9.8 Pavement repair health hazards														
10 AFS Specific Publications TR: TOs 0-1-1, 0-1-20, 00-20-1, 00-5-2, 00-20-7														
10.1 Locate technical order numbers and titles in index type technical orders/commercial manuals												b		
10.2 Use technical orders/commercial manuals to:														
10.2.1 Perform operation checks									2b			B		
10.2.2 Perform maintenance									2b			B		
10.2.3 Locate part numbers in illustrated parts breakdown									2b			B		
11 Project Planning TR: AFM 67-1 Vol 2; FM 5-233														
11.1 Construction stake markings									A			B		
11.2 Equipment requirements									A			B		
11.3 Material requirements									A			B		
11.4 Drawings									A			B		
11.5 Levels									A			B		
11.6 Global Positioning System (GPS)									A			B		
12 Powered Equipment TR: TO 34Y and 36C Series														
12.1 Perform operational checks									2b			B		

	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
1. Tasks, Knowledge And Technical References	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL
12.2 Perform operator maintenance									2b			B		
12.3 Use powered equipment														
12.3.1 Vibrator tamper									2b			B		
12.3.2 Vertical router									2b			B		
12.3.3 Crack saw									2b			B		
12.3.4 Portable concrete mixer									2b			B		
12.3.5 Power screed									b			B		
12.3.6 Concrete saw		*							2b			B		
12.3.7 K-12 saws									2b			B		
12.3.8 Saw blades														
12.3.8.1 Asphalt									2b			B		
12.3.8.2 Wet/dry									2b			B		
12.3.9 Hot/cold joint sealing machines									a			B		
12.3.10 Chain saw									2b			B		
12.4 Air compressor														
12.4.1 Perform operational checks		*							2b			B		
12.4.2 Perform operator maintenance		*							2b			B		
12.4.3 Operate		*							2b			B		
12.4.4 Use air compressor accessories TR: TO 34Y Series														
12.4.4.1 Pneumatic drill									2b			B		
12.4.4.2 Pneumatic hammer with attachments		*							2b			B		
12.4.4.3 Pneumatic tamper									2b			B		
13 Material Handling Equipment														
13.1 Dump trucks														
13.1.1 Perform operational checks		*							2b			B		
13.1.2 Perform operator's maintenance		*							2b			B		
13.1.3 Operate														
13.1.3.1 Haul material		*							2b			B		
13.1.3.2 Dump material		*							2b			B		
13.1.3.3 Spread material		*							2b			B		
13.1.3.4 Tow equipment		*							2b			B		
13.1.4 Tailgate														
13.1.4.1 Removal		*							b			B		
13.1.4.2 Installation		*							b			B		
13.2 Wheel mounted front-end loaders														
13.2.1 Perform operational checks		*							2b			B		
13.2.2 Perform operator's maintenance		*							2b			B		
13.2.3 Loader operations:														
13.2.3.1 Load material into dump truck		*							2b			B		
13.2.3.2 Level area		*							2b			B		
13.2.3.3 Spread materials		*							2b			B		
13.2.3.4 Stockpile materials		*							2b			B		
13.2.3.5 Backfill		*							2b			B		
13.2.3.6 Clamshell bucket		*							2b			B		
13.2.3.7 Excavate												B		
13.2.4 Forklift attachment operations:														
13.2.4.1 Load/unload material		*							2b			B		
13.2.4.2 Transport material		*							2b			B		
13.2.5 Move material using:														

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
									(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL
13.2.5.1 Boom												A		
13.2.5.2 Blade												A		
13.2.5.3 Change attachments on front-end loaders		*							2b			B		
13.3 Skid steer loader														
13.3.1 Perform operational checks									2b			B		
13.3.2 Perform operator's maintenance									2b			B		
13.3.3 Operate using attachments such as:														
13.3.3.1 Impactor									2b			B		
13.3.3.2 Bucket									2b			B		
13.3.3.3 Forklift									2b			B		
13.3.3.4 Earth auger									2b			B		
13.3.3.5 Backhoe												B		
13.3.3.6 Sweeper									2b			B		
13.3.4 Perform functions such as:														
13.3.4.1 Excavating									2b			B		
13.3.4.2 Backfill									2b			B		
13.3.4.3 Leveling									2b			B		
13.3.4.4 Load materials									2b			B		
13.3.5 Change attachments on skid steer loader									2b			B		
13.4 Tractor-trailer combinations														
13.4.1 Perform operational checks		*							b			B		
13.4.2 Perform operator's maintenance		*							b			B		
13.4.3 Operate														
13.4.3.1 Couple/uncouple trailer		*							b			B		
13.4.3.2 Load/unload construction equipment		*							b			B		
13.4.3.2.1 Utilize cribbing									b			B		
13.4.3.3 Load/unload construction materials		*							b			B		
13.4.3.4 Secure equipment/materials using:														
13.4.3.4.1 Chains and binders		*							b			B		
13.4.3.4.2 Cargo straps		*							b			B		
13.4.3.5 Backing		*							b			B		
13.4.3.6 Over the road		*							b			B		
13.5 Asphalt pavers														
13.5.1 Perform operational checks												B		
13.5.2 Perform operator's maintenance												B		
13.5.3 Operate self-propelled paver												B		
13.6 Graders														
13.6.1 Perform operational checks			**						2b			B		
13.6.2 Perform operator's maintenance			**						2b			B		
13.6.3 Perform grader operations such as:														
13.6.3.1 Ditching									2b			B		
13.6.3.2 Sloping banks												B		
13.6.3.3 Spreading materials in articulated mode												B		
13.6.3.4 Leveling materials			**						2b			B		
13.6.3.5 Maintaining unpaved surfaces			**						2b			B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
13.6.3.6 Finish grading									b			B		
13.6.3.7 Scarifying materials									b			B		
13.6.3.8 Mixing materials									A			B		
13.6.3.9 GPS												B		
13.7 Industrial tractors														
13.7.1 Perform operational checks									b			B		
13.7.2 Perform operator's maintenance									b			B		
13.7.3 Operate with attachments such as:														
13.7.3.1 Dragbox												B		
13.7.3.2 Earth auger												B		
13.7.4 Tow equipment									b			B		
13.8 Crawler tractor														
13.8.1 Perform operational checks			**						2b			B		
13.8.2 Perform operator's maintenance			**						2b			B		
13.8.3 Perform crawler tractor operations such as:														
13.8.3.1 Stockpiling			**						2b			B		
13.8.3.2 Leveling			**						2b			B		
13.8.3.3 Ditching									2b			B		
13.8.3.4 Ripping												B		
13.8.3.5 Winching												B		
13.8.3.6 Clearing									b			B		
13.8.3.7 Bank sloping												B		
13.8.3.8 Tow equipment									A			B		
13.8.3.9 GPS														
14 Motorized Scrapers TR: TOs 36C22-2 and 36C22-3 Series														
14.1 Perform operational checks												A		
14.2 Perform operator's maintenance												A		
14.3 Operate														
14.3.1 Excavate												A		
14.3.2 Haul material												A		
14.3.3 Dump material												A		
14.3.4 Spread material												A		
15 Compaction Equipment TR: TO 36C20 Series														
15.1 Perform operational checks		*							2b			B		
15.2 Perform operator's maintenance		*							2b			B		
15.3 Compact earthen materials using:														
15.3.1 Pneumatic tired roller									b			B		
15.3.2 Sheepsfoot roller									b			B		
15.3.3 Steel wheel vibratory roller		*							2b			B		
16 Liquid Material Distributors TR: TO 36C5 and 36C20 Series														
16.1 Bituminous distributor														
16.1.1 Perform operational checks												B		
16.1.2 Perform operator's maintenance												B		
16.1.3 Perform operations such as:														
16.1.3.1 Heating												B		
16.1.3.2 Application												B		
16.2 Water Distributor														

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level (1) Course	3 Skill Level (2) DL	5 Skill Level (1) AFQTP	5 Skill Level (2) CDC	7 Skill Level (1) Course	7 Skill Level (2) DL
16.2.1 Perform operational checks		♦							1a			B		
16.2.2 Perform operator's maintenance		♦							1a			B		
16.2.3 Perform operations such as:														
16.2.3.1 Gravity feed		♦							1a			B		
16.2.3.2 Pressure spray		♦							1a			B		
16.2.3.3 Fill from hydrant		♦							a			B		
16.2.3.4 Fill from stand		♦							1a			B		
16.2.3.5 Suction fill		♦							a			B		
17 Sweepers TR: TO 36C25 Series														
17.1 Towed sweepers														
17.1.1 Perform operational checks												B		
17.1.2 Perform operator's maintenance												B		
17.1.3 Operate												B		
17.2 Front-mounted sweepers														
17.2.1 Perform operational checks									A			B		
17.2.2 Perform operator's maintenance									A			B		
17.2.3 Operate									A			B		
17.3 Multi-purpose sweepers														
17.3.1 Perform operational checks		*							2b			B		
17.3.2 Perform operator's maintenance		*							2b			B		
17.3.3 Maintain/replace attachments:														
17.3.3.1 Change brooms		*							2b			B		
17.3.3.2 Change wearing surfaces		*							2b			B		
17.3.3.3 Adjust hood		*							2b			B		
17.3.3.4 Adjust broom		*							2b			B		
17.3.4 Perform cleaning operations		*							2b			B		
17.3.5 Operate on:														
17.3.5.1 Airfield		♦							2b			B		
17.3.5.2 Street		*							2b			B		
17.3.6 Operate suction hose attachment		*							2b			B		
18 Cranes TR: TO 36C3, 36C23, 36Y2, 36Y8 Series														
18.1 General														
18.1.1 Perform operational checks									A			B		
18.1.2 Perform operator's maintenance									A			B		
18.1.3 Operate crane carrier									A			B		
18.1.4 Interpret load charts		♦							A			B		
18.1.5 Setup and maneuver		♦							A			B		
18.1.6 Hand signals		♦							A			B		
18.1.7 Safety requirements		♦							A			B		
18.2 Hydraulic telescopic cranes														
18.2.1 Perform operational checks									A			B		
18.2.2 Perform operator's maintenance									A			B		
18.2.3 Operate with:														
18.2.3.1 Hookblock									A			B		
18.2.3.2 Working platform									A			B		
18.2.3.3 Clamshell									A			B		
18.2.4 Install and remove cables									A			B		
18.2.5 Change attachments														

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
18.2.5.1 Taglines									A			B		
18.2.5.2 Dielectric boom shield									A			B		
19 Rigging and Lifting TR: TM 5-725														
19.1 Identify the handling characteristics and inspection requirements of:														
19.1.1 Chains		♦							A			B		
19.1.2 Wire ropes		♦							A			B		
19.1.3 Nylon slings		♦							A			B		
19.2 Rig loads to be lifted using:														
19.2.1 Chains		♦							a			B		
19.2.2 Wire rope		♦							a			B		
19.2.3 Nylon slings		♦							a			B		
19.2.4 Spreader bars		♦							a			B		
19.3 Move and place equipment using:														
19.3.1 Skids												B		
19.3.2 Rollers												B		
19.3.3 Hydraulic/screw/ratchet jacks												B		
19.3.4 Deadman devices												B		
19.4 Fabricate wire rope slings												b		
20 Excavating/Trenching Machines TR: TR: 36C6, 36C12, 36C37 Series														
20.1 Shoring applications									A			B		
20.2 Backhoe														
20.2.1 Perform operational checks		*							2b			B		
20.2.2 Perform operator's maintenance		*							2b			B		
20.2.3 Perform backhoe operations such as:														
20.2.3.1 Excavate with front bucket												B		
20.2.3.2 Excavate with rear bucket		*							2b			B		
20.2.3.3 Load with front bucket		*							b			B		
20.2.3.4 Load with rear bucket		*							2b			B		
20.2.3.5 Backfill with front bucket		*							2b			B		
20.2.3.6 Backfill with rear bucket		*							2b			B		
20.2.3.7 Break materials with impactor												B		
20.3 Hydraulic excavator														
20.3.1 Perform operational checks									2b			B		
20.3.2 Perform operator's maintenance									2b			B		
20.3.3 Perform excavator operations such as:														
20.3.3.1 Excavate with bucket									2b			B		
20.3.3.2 Load with bucket									2b			B		
20.3.3.3 Backfill with bucket/dozer blade									2b			B		
20.3.3.4 Compact materials									1b			B		
20.3.3.5 Break materials with impactor									2b			B		
20.3.3.6 Lift/position loads									2b			B		
20.3.4 Change excavator attachments such as:														
20.3.4.1 Bucket									b			B		
20.3.4.2 Impactor									b			B		
20.3.4.3 Compactor									1b			B		
20.4 Trenching machines														

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
									(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL
20.4.1 Perform operational checks		♦							b			B		
20.4.2 Perform operator's maintenance		♦							b			B		
20.4.3 Perform operations such as:														
20.4.3.1 Trenching		♦							b			B		
20.4.3.2 Backfilling		♦							b			B		
21 Snow and Ice Control TR: AFI 32-1045; TO 36C5-3, 36C18, and 36C25-2 Series														
21.1 Snow and ice control procedures:														
21.1.1 Snow and Ice Control Plan									A			B		
21.1.2 Airfield paved surfaces									A			B		
21.1.3 Non-airfield surfaces									A			B		
21.2 Snow removal using:														
21.2.1 Snow blowers									A			B		
21.2.2 Snow plows									A			B		
21.2.3 Snow sweepers									A			B		
21.2.4 Multi-purpose snow removal unit									A			B		
21.3 Perform ice control operations using:														
21.3.1 Mechanical equipment									A			B		
21.3.2 Chemicals									A			B		
21.3.3 Abrasives									A			B		
21.4 Runway Ice Detection System (RIDS)									A			B		
21.5 Snow & Ice Control System (SNIC)									A			B		
21.6 Snow blowers														
21.6.1 Perform operational checks												B		
21.6.2 Perform operator's maintenance												B		
21.6.3 Operate												B		
21.7 Snow plows														
21.7.1 Perform operational checks												B		
21.7.2 Perform operator's maintenance												B		
21.7.3 Operate												B		
21.8 Snow sweepers														
21.8.1 Perform operational checks												B		
21.8.2 Perform operator's maintenance												B		
21.8.3 Operate												B		
21.9 Multi-purpose snow removal unit														
21.9.1 Perform operational checks												B		
21.9.2 Perform operator's maintenance												B		
21.9.3 Operate												B		
21.9.4 Change attachments												B		
21.10 Environmental concerns														
21.10.1 Chemicals									A			B		
21.10.2 Abrasives									A			B		
22 Paved Surfaces TR: AFJMAN 32-1038; AFM 88-6, 88- 7, 88-19, 88-24; UFC 3-250-01/03/04; Design and Control of Concrete Mixtures; The Asphalt Handbook														
22.1 Construct pavement surface														
22.1.1 Interpret construction drawings			**						A			B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
22.1.2 Layout the area using:														
22.1.2.1 Levels														
22.1.2.1.1 Line level									2b			B		
22.1.2.1.2 Laser level		♦							A			B		
22.1.2.1.3 Carpenter hand level									2b			B		
22.1.2.1.4 Engineer level		♦							2b			B		
22.1.2.2 GPS									A			B		
22.1.3 Prepare area as indicated by construction stakes														
22.1.3.1 Clear the area using hand tools									2b			B		
22.1.3.2 Clear the area using construction equipment									2b			B		
22.1.4 Compute material requirements														
22.1.4.1 Fill		*							2b			B		
22.1.4.2 Asphalt		*							2b			B		
22.1.4.3 Concrete		*							2b			B		
22.1.4.4 Base course		*							2b			B		
22.1.5 Prepare subgrade														
22.1.5.1 Soil fundamentals														
22.1.5.1.1 Soil types									A			B		
22.1.5.1.2 Soil construction properties									A			B		
22.1.5.1.3 Soil stabilization techniques									A			B		
22.1.5.2 Stabilize using:														
22.1.5.2.1 Mechanical means			**						b			B		
22.1.5.2.2 Chemicals			**						b			B		
22.1.5.3 Compact		*							2b			B		
22.1.6 Prepare base course														
22.1.6.1 Place materials		*							2b			B		
22.1.6.2 Compact materials		*							2b			B		
22.2 Rigid pavement														
22.2.1 Types of concrete materials									A			B		
22.2.2 Standard concrete mix fundamentals									A			B		
22.2.3 Construct concrete slab														
22.2.3.1 Install forms														
22.2.3.1.1 Wood		*							2b			B		
22.2.3.1.2 Metal		*							2b			B		
22.2.3.1.2.1 Lubricate		*							2b			B		
22.2.3.2 Install reinforcing materials														
22.2.3.2.1 Wire mesh		*							2b			B		
22.2.3.2.2 Rebar		*							b			B		
22.2.3.3 Install load transfer devices														
22.2.3.3.1 Keyways									b			B		
22.2.3.3.2 Dowels									b			B		
22.2.3.4 Perform concrete test														
22.2.3.4.1 Perform slump test			**						2b			B		
22.2.3.4.2 Prepare cylinders for testing			**						2b			B		
22.2.3.5 Place concrete		*							2b			B		
22.2.3.6 Fabricate joints		*							2b			B		
22.2.3.7 Finish concrete														
22.2.3.7.1 Trowel									b			B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
									(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL
22.2.3.7.2 Non-Skid		*							2b			B		
22.2.3.8 Cure concrete									2b			B		
22.2.3.9 Remove/clean forms									2b			B		
22.2.3.10 Landscape site									2b			B		
22.3 Repair defective pavement TR: AFR 85-9, 93-5; AFM 88-6, UFC 3-270-03														
22.3.1 Perform full depth pavement repair TR: AFJMAN 32-1038; UFC 3-270-04														
22.3.1.1 Identify defective pavement		*							b			B		
22.3.1.2 Cut pavement using concrete saw		*							2b			B		
22.3.1.3 Break pavement using air compressor with jack hammer		*							2b					
22.3.1.4 Remove pavement									2b			B		
22.3.1.5 Prepare the area														
22.3.1.5.1 Remove/replace base course									2b			B		
22.3.1.5.2 Remove/replace subgrade									2b			B		
22.3.1.6 Replace load transfer devices									b			B		
22.3.1.7 Replace reinforcement material									2b			B		
22.3.1.8 Replace concrete														
22.3.1.8.1 Mix concrete using:														
22.3.1.8.1.1 Hand tools									b			B		
22.3.1.8.1.2 Portable concrete mixer									2b			B		
22.3.1.8.2 Place concrete									2b			B		
22.3.1.8.3 Finish concrete									2b			B		
22.3.1.8.4 Cure concrete									2b			B		
22.3.2 Perform partial depth/spall repair TR: AFJMAN 32-1038; UFC 3-270-03														
22.3.2.1 Identify defective pavement									b			B		
22.3.2.2 Cut pavement using concrete/K-12 saw									b			B		
22.3.2.3 Break pavement using air compressor with jack hammer									b			B		
22.3.2.4 Remove pavement									b			B		
22.3.2.5 Mix/place patch materials									b			B		
22.4 Repair defective sealing material TR: AFJMAN 32-1038; UFC 3-270-03														
22.4.1 Prepare joints/cracks for resealing														
22.4.1.1 Remove existing sealant using:														
22.4.1.1.1 Vertical router									2b			B		
22.4.1.1.2 Joint plow									a			B		
22.4.1.1.3 Crack saw									b			B		
22.4.1.2 Saw or reface the joint using concrete saw									2b			B		
22.4.1.3 Clean joints/cracks with:														
22.4.1.3.1 Water blaster									b			B		
22.4.1.3.2 High pressure air									2b			B		
22.4.1.3.3 Mechanical wire wheel									A			B		
22.4.2 Reseal joints/cracks														
22.4.2.1 Install backer materials									b			B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL
22.4.2.2 Apply cold sealants									1b			B		
22.4.2.3 Apply Hot sealants									b			B		
22.5 Flexible pavements TR: AFJMAN 32-1038														
22.5.1 Construct with bituminous materials														
22.5.1.1 Types									A			B		
22.5.1.2 Uses									A			B		
22.5.1.3 Environmental concerns									A			B		
22.5.2 Apply prime coat									b			B		
22.5.2.1 Determine asphalt temperatures									A			B		
22.5.3 Place asphalt		*							2b			B		
22.5.4 Asphalt concrete lifts														
22.5.4.1 Binder course									A			B		
22.5.4.2 Wear course									A			B		
22.5.5 Compact asphalt		*							2b			B		
22.5.6 Repair defective pavement														
22.5.6.1 Identify the area		*							2b			B		
22.5.6.2 Cut area		*							2b			B		
22.5.6.3 Remove pavement		*							2b			B		
22.5.6.4 Prepare base		*							2b			B		
22.5.6.5 Prepare subgrade		*							2b			B		
22.5.6.6 Apply tack coat		*							1b			B		
22.5.6.7 Place asphalt		*							2b			B		
22.5.6.8 Compact asphalt		*							2b			B		
22.5.7 Perform partial depth repair TR: AFJMAN 32-1038; UFC 3-270-01									b			B		
22.6 Repair cracks in flexible pavements TR: AFJMAN 32-1038; UFC 3-370-02														
22.6.1 Prepare cracks using:														
22.6.1.1 Vertical router									A			B		
22.6.1.2 Impact router									A			B		
22.6.1.3 Crack saw									A			B		
22.6.1.4 Mechanical wire wheel									A			B		
22.6.2 Clean area using high pressure air									A			B		
22.6.3 Seal cracks using:														
22.6.3.1 Hot applied sealant									A			B		
22.6.3.2 Cold applied sealant									A			B		
22.6.3.3 Apply surface treatments														
22.6.3.3.1 Fog seal									A			B		
22.6.3.3.2 Slurry seal									A			B		
22.6.3.3.3 Chip seal									A			B		
23 Drainage Systems TR: AFR 85-8; AFM 88-5														
23.1 Surface drainage														
23.1.1 Construct									b			B		
23.1.2 Inspect									b			B		
23.1.3 Repair									b			B		
23.2 Sub-surface drainage														
23.2.1 Install									b			B		
23.2.2 Inspect									b			B		
23.2.3 Repair									b			B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
24 Fences TR: AFIs 31-209, 32-1024														
24.1 Install														
24.1.1 Chain link									b			B		
24.1.2 Barbed wire									b			B		
24.1.3 Snow fence												B		
24.2 Inspect														
24.2.1 Chain link									b			B		
24.2.2 Barbed wire									b			B		
24.3 Repair														
24.3.1 Chain link									b			B		
24.3.2 Barbed wire									b			B		
25 AFSC Specific Contingency Responsibilities TR: AFIs 10-209, 10-210, 10-211, 32-1026; TOs 35E5-6-1, 35E4-132-1, 35E4-94-1; Army TMs 10-8340-207-14, 10-450-200-12; WMP-1, Annex S; AFPAM 10-219 Vols 2, 3, 4, & 5; UFC 3-270-07														
25.1 Airfield Damage Repair (ADR) TR: AFPAM 10-219 Vol 4; AFI 10-210; TOs 35E2-3-1, 35E2-2-7, 35E2-4-1; UFC 3-270-07														
25.1.1 ADR philosophy									A			B		
25.1.2 ADR organization									A			B		
25.1.3 Equipment/vehicular "R" packages									A			B		
25.1.4 Repair procedures														
25.1.4.1 Crater repair/RQC									b			B		
25.1.4.2 AM-2 matting									b			B		
25.1.4.3 AM-X matting (new mat)									b			B		
25.1.4.4 Fiberglass mat									b			B		
25.1.4.5 Spall repair									b			B		
25.2 Contingency oxyacetylene cutting TR: TO 34W-1-5; Victor Corp. Welding Skills Book														
25.2.1 Oxyacetylene cutting applications														
25.2.1.1 Set up									2b			B		
25.2.1.2 Perform cutting operations									2b			B		
25.2.1.3 Disassemble									2b			B		
25.3 Airfield Paint TR: AFPAM 10-219 Vol 4; TO 35E2-6-1; AFAM 32-1076; AFIs 32-1042, 32-1044, 13-217, 10-44; Army FM 5-430-00-2														
25.3.1 Characteristics of paint used for pavement surfaces												B		
25.3.2 Striping														
25.3.2.1 Runways/Minimum Operating Strip (MOS)												B		
25.3.2.2 Taxiways												B		
25.3.2.3 Parking aprons												B		

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
25.4 RED HORSE AFS specific operations														
25.4.1 Asphalt batch plant operations TR: AFI 10-209												A		
25.4.2 Concrete batch plant operations TR: AFI 10-209												A		
25.4.3 Concrete Mobile/Deployable Pavement Repair System (DPRS) TR: AFI 10-209												A		
25.4.4 Well drilling operations TR: AFI 10-209												A		
25.4.5 Quarry operations												A		
25.4.6 Airborne operations												A		
25.5 Passive defense measures/splinter protection construction TR: AFPAM 10-219 Vol 2 & 5; AFDD 42; AFMAN 32-4005; Instructions for Assembly and Erection of (Type A1 and B1) Aircraft Revetment Kit, 1 Oct 1998														
25.5.1 Primary revetment materials									A			B		
25.5.2 Expedient revetment materials									A			B		
25.5.3 Construct kit-type revetments														
25.5.3.1 A-1												B		
25.5.3.2 B-1		♦										B		
25.5.3.3 Expandable bin type revetment		*										B		
25.5.3.4 Pre-cast modular concrete		♦										B		
25.6 Expedient field construction														
25.6.1 Sanitary landfill TR: AFI 41-201; AFPAM 10-219 Vol 5												A		
25.6.2 Berms and dikes TR: AFPAM 10-219 Vol 2; TM 5-302														
25.6.2.1 Construct berm									2b			B		
25.6.2.2 Maintain berm									b			B		
25.6.2.3 Fuel bladders									A			B		
25.6.2.4 Ammunition pads									A			B		
25.6.3 Waste water disposal TR: AFPAM 10-219 Vol 5; AFIs 10-210, 32-1067, 48-110; AFMAN 91-32; AFD 48-1														
25.6.3.1 Oxidation lagoon									A			B		
25.6.3.2 Evaporation lagoon									A			B		
25.6.4 Roadwork TR: AFI 32-1045; AFPAM 10-219 Vol 3														
25.6.4.1 Timber bridge												B		
25.6.4.2 Drainage structures												A		
25.6.4.3 Soil cement road									A			B		
25.7 Expedient beddown methods														
25.7.1 BEAR type assets														
25.7.2 Temper tent TR: TO 35E3-6-1; AFPAM 10-219 Vols 2 & 5; AFH 10-222 Vol 1														

1. Tasks, Knowledge And Technical References	2. Core Tasks			3. Certification For OJT					4. Proficiency Codes Used To Indicate Training/Information Provided (See Note)					
	A	B	C	A	B	C	D	E	A		B		C	
	3 Level	5 Level	7 Level	Tng Start	Tng Complete	Trainee Initials	Trainer Initials	Certifier Initials	3 Skill Level		5 Skill Level		7 Skill Level	
	(1) Course	(2) DL	(1) AFQTP	(2) CDC	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL	(1) Course	(2) DL
25.7.2.1 Assemble												B		
25.7.2.2 Disassemble												B		
25.7.3 Small shelter system														
25.7.3.1 Erect												B		
25.7.3.2 Disassemble												B		
25.7.3.3 Reconstitute												B		
25.7.4 Medical facilities erection support TR: AFPAM 10-219 Vol 5; AFI 10-404												B		
25.8 Miscellaneous support. Special purpose vehicles/equipment TR: TO Series 35C6, 36A2, 36A12, 36C6, 36C12, 36C14, 36C20, 36C25, 36C37, 36M2; Miller Spreader Saw Manual (SMG Machines-Abrasives)														
25.8.1 Special purpose vehicles/equipment TR: AFD 25-1; AFMANs 24-306, 24-309; AFIs 23-101, 10-210, 24-301; AFOSH 91-46; AFPAM 10-219 Vol 4; TA 12														
25.8.2 General purpose vehicles (up to 14,000 GVW)														
25.8.3 HMMWV														

Note: BLK #4: Columns (1) & (2) can be relabeled to meet CF Requirements; i.e., 2 phase 3 skill level course, 5 lvl QTPs.

CE AFQTP Documentation Record For AFSC 3E2X1

- This document supersedes previous AF Form 797 Overlay. Maintain in member's AF Form 623 until 7-level upgrade
- Trainers/Certifiers enter their name and initials in the identification block at beginning of the STS
- Upon administering AFQTPs, enter start date in column 4 of this record
- Upon completion of each unit, document columns 5, 6, and 7
- Upon completion of applicable CerTests, trainer will place the completion date in column 8
- Transcribe by entering current date in columns 5 and 8, Trainees & Trainers Initials in columns 6 & 7

1	2	3	4	5	6	7	8
TASK NUMBER	TASKS, KNOWLEDGE, AND TECHNICAL REFERENCES	* 5 LEVEL * 6 LEVEL * 7 LEVEL ♦ See Note 1	START DATE	COMPLETE DATE	TRAINEE'S INITIALS	TRAINER'S INITIALS	CerTest COMP DATE
8	Communications TR: AFI 33-106; AFJMAN 24-306						
8.1	Use radios	*					
8.2	Use hand signals	*					
12	Powered Equipment TR: TO 34Y and 36C Series						
12.3.6	Concrete saw	*					
12.4.1	Air compressor: perform operational checks	*					
12.4.2	Air compressor: perform operator maintenance	*					
12.4.3	Air compressor: operate	*					
12.4.4.2	Use Air compressor accessories: pneumatic hammer with attachments	*					
13	Material Handling Equipment Dump Trucks						
13.1	Dump trucks						
13.1.1	Perform operational checks	*					
13.1.2	Perform operator's maintenance	*					
13.1.3.1	Haul material	*					
13.1.3.2	Dump material	*					
13.1.3.3	Spread material	*					
14.1.3.4	Tow equipment	*					
14.1.4.1	Tailgate removal	*					
14.1.4.2	Tailgate installation	*					
13.2	Wheel mounted Front-end Loaders						
13.2.1	Perform operational checks	*					
13.2.2	Perform operator's maintenance	*					
13.2.3.1	Loader operations: load material into dump truck	*					
13.2.3.2	Loader operations: level area	*					
13.2.3.3.	Loader operations: spread material	*					
13.2.3.4	Loader operations: stockpile materials	*					
13.2.3.5	Loader operations: backfill	*					
13.2.3.6	Loader operations: clamshells	*					
13.2.4.1	Forklift attachment operations: load/unload materials	*					
13.2.4.2.	Forklift attachment operations: transport materials	*					

13.2.5.3.	Change attachments on front end loader	*					
13.4	Tractor-trailer Combinations						
13.4.1	Perform operational checks	*					
13.4.2	Perform operator's maintenance	*					
13.4.3.1	Operate: couple/uncouple	*					
13.4.3.2	Operate: load/unload construction equipment	*					
13.4.3.2.1	Utilize cribbing	*					
13.4.3.3	Load/unload construction materials	*					
13.4.3.4.1	Secure equipment/materials using: chains and binders	*					
13.4.3.4.2	Secure equipment/materials using: cargo straps	*					
13.4.3.5	Backing	*					
13.4.3.6	Over the road	*					
13.6	Graders						
13.6.1	Perform operational checks	**					
13.6.2	Perform operator's maintenance	**					
13.6.3.4	Leveling materials	**					
13.6.3.5	Maintaining unpaved surfaces	**					
13.8	Crawler Tractors						
13.8.1	Perform operational checks	**					
13.8.2.	Perform operator's maintenance	**					
13.8.3.1.	Perform crawler operations such as: stockpiling	*					
13.8.3.2.	Perform crawler operations such as: leveling	*					
15	Compaction Equipment TR: TO 36C20 Series*						
15.1	Perform operational checks	*					
15.2	Perform operator's maintenance	*					
15.3.3	Compact earthen materials using steel wheel vibratory roller	*					
16	Liquid material distributors TR: TO 36C5 and 36C20 Series						
16.2	Water Distributor						
16.2.1	Perform operational checks	◆					
16.2.2	Perform operator's maintenance	◆					
16.3.1	Perform operations such as: gravity feed	◆					
16.3.2	Perform operations such as: pressure spray	◆					
16.3.3	Perform operations such as: fill from hydrant	◆					
16.3.4	Perform operations such as: fill from stand	◆					
16.3.5	Perform operations such as: suction fill	◆					
17	Sweepers TR: TO 36C25 Series						
17.3	Multi-purpose Sweepers						
17.3.1	Perform operational checks	*					
17.3.2	Perform operator's maintenance	*					
17.3.3.1	Maintain/replace attachments: change brooms	*					
17.3.3.2	Maintain/replace attachments: change wearing surfaces	*					
17.3.3.3	Maintain/replace attachments: adjust hood	*					
17.3.3.4	Maintain/replace attachments: adjust broom	*					
17.3.4	Perform cleaning operations	*					
17.3.5.1	Operate on: airfield	◆					
17.3.5.2	Operate on street	*					
17.3.6	Operate suction hose attachment	*					
18	Cranes: TR TO 36C3, 36C23, 36Y2, and 36Y8 Series						
18.1.4	Interpret load charts	◆					
18.1.5	Setup and maneuver	◆					
18.1.6	Hand signals	◆					

18.1.7	Safety requirements	◆					
19	Rigging and Lifting TR TM5-725						
19.1	Identify the Handling Characteristics and Inspections Requirements of						
19.1.1	Chains	◆					
19.1.2	Wire ropes	◆					
19.1.3	Nylon slings	◆					
19.2.1	Rig loads to be lifted using: chains	◆					
19.2.2	Rig loads to be lifted using: wire rope	◆					
19.2.3	Rig loads to be lifted using: nylon slings	◆					
19.2.4	Rig loads to be lifted using: spreader bars	◆					
20	Excavating/Trenching Machines TR: 36C6, 36C12, and 36C37 Series						
20.2	Backhoe						
20.2.1	Perform operational checks	*					
20.2.2	Perform operator's maintenance	*					
20.2.3.2	Perform backhoe operations such as: excavate with rear bucket	*					
20.2.3.3	Perform backhoe operations such as: load with front bucket	*					
20.2.3.4	Perform backhoe operations such as: load with rear bucket	*					
20.2.3.5	Perform backhoe operations such as: backfill with front bucket	*					
20.2.3.6	Perform backhoe operations such as: backfill with rear bucket	*					
20.4	Trenching Machines						
20.4.1	Perform operational checks	◆					
20.4.2	Perform operator's maintenance	◆					
20.4.3.1	Perform operations such as: trenching	◆					
20.4.3.2	Perform operations such as: backfilling	◆					
22	Paved Surfaces TR: AFJMAN 32-1038; AFM 88-6, 88-7, 88-19, 88-24; UFC 3-250-01/03/04; Design and Control of Concrete Mixtures; The Asphalt Handbook						
22.1	Construct Pavement Surfaces						
22.1.2	Interpret construction drawings	**					
22.1.2.1.2	Layout the area using: laser level	◆					
22.1.2.1.4	Layout the area using: engineer level	◆					
22.1.2.2	GPS						
22.1.4.1	Compute material requirements: fill	*					
22.1.4.2	Compute material requirements: asphalt	*					
22.1.4.3	Compute material requirements: concrete	*					
22.1.4.4	Compute material requirements: base course	*					
22.1.5.2.1	Stabilize using: mechanical means	**					
22.1.5.2.2	Stabilize using: chemicals	**					
22.1.6.1	Prepare base course: place materials	*					
22.1.6.2	Prepare base course: compact materials	*					
22.2	Rigid Pavement						
22.2.3.1.1	Install forms: wood	*					
22.2.3.1.2	Install forms: metal	*					
22.2.3.1.3	Install forms: lubricate	*					
22.2.3.2.1	Install reinforcing materials: wire mesh	*					
22.2.3.2.2	Install reinforcing materials: rebar	*					
22.2.3.4.1	Perform concrete test: perform slump test	**					
22.2.3.4.2	Perform concrete test: prepare cylinders for testing	**					

22.2.3.5	Place concrete	*					
22.2.3.6	Fabricate joints	*					
22.2.3.7.2	Finish concrete: non skid	*					
22.3	Repair Defective Pavement TR: AFR 85-9, 93.5; AFM 88-6, UFC 3-270-03, 04; AFJMAN 32-1038						
22.3.1.1	Identify defective pavement	*					
22.3.1.2	Cut pavement using concrete saw	*					
22.3.1.3	Break pavement using air compressor with jack hammer	*					
22.5	Flexible Pavements TR: AFJMAN 32-1038						
22.5.3	Place asphalt	*					
22.5.5	Compact asphalt	*					
22.5.6.1	Repair defective pavement: identify the area	*					
22.5.6.2	Repair defective pavement: cut area	*					
22.5.6.3	Repair defective pavement: remove pavement	*					
22.5.6.4	Repair defective pavement: prepare base	*					
22.5.6.5	Repair defective pavement: prepare sub-grade	*					
22.5.6.6	Repair defective pavement: apply tack coat	*					
22.5.6.7	Repair defective pavement: place asphalt	*					
22.5.6.8	Repair defective pavement: compact asphalt	*					
25.5	Passive Defense Measures/Splinter Protection Construction: TR AFPAM 10-219 Vol 2 & 5; AFDD 42; AFMAN 32-4005; Instructions for Assembly and Erection of (Type A1 & B1) Aircraft Revetment Kit						
25.5.3.2	Construct kit-type revetments: B1	◆					
25.5.3.3	Construct kit-type revetments: expandable bin type revetment	*					
25.5.3.4	Construct kit-type revetments: pre-cast modular concrete	◆					

Note 1: ◆ Diamond tasks are extremely important to the career field. Diamond tasks are the same as core tasks with one exception—equipment shortfalls at most locations have created problems with the actual hands-on certification of these tasks. In instances where required equipment is not available for instruction, completion of the task's AFQTP and passing the corresponding CerTest is all that is required for upgrade and qualification training. Hands-on certification should be accomplished at the first opportunity when equipment is available. In locations where the equipment is available for hands-on certification, CerTest completion is still a mandatory requirement.

SECTION B - COURSE OBJECTIVE LIST (COL)

(This section used when developing lesson plans)

4. Measurement. Measurement of each objective is indicated as follows:

4.1. Written Test (W) - used to sample each knowledge objective and the knowledge components of performance objectives.

4.2. Performance Test (P) - used under specified conditions in a formal testing mode to measure student accomplishment of performance objectives after the teaching-learning activity has been completed.

4.3. Progress Checks (PC) - administered by the instructor during classroom or laboratory instruction time to assess the student's accomplishment of knowledge or performance objectives.

5. Standard. The standard is 70% on written examinations. Standards for performance measurement are indicated in the objectives and delineated on the individual progress checklist. Instructor assistance is provided as needed during the progress check, and students may be required to repeat all or parts of the behavior until satisfactory performance is attained.

6. Proficiency Level. Most task performance is taught to the "2b" proficiency level which means the student can do most parts of the task, but does need assistance on the hardest parts of the task (partially proficient). The student can also determine step-by-step procedures for doing the task.

7. Course Objective List. These objectives are listed in the sequence taught by Block of Instruction.

7.1. Initial Skills Course. A detailed listing of the initial skills course objectives may be obtained by written request to 366 TRS/DO, 727 Missile Road, Sheppard AFB TX 76311-2254.

SECTION C - SUPPORT MATERIALS

8. AFQTPS.

8.1. Air Force Qualification Training Packages. An instructional package designed for units to qualify, or aid qualification, on core or diamond tasks. AFQTPs are the Air Force's standardized method for performing the task. The AFQTP may be printed (paper-based), computer-based, or in other audiovisual media. See AFCESA web page for up-to-date AFQTPs at:

https://wwwmil.afcesa.af.mil/Directorate/CEO/Training/QTPs/ceof_3e2x1.htm.

8.2. CerTest

8.2.1. CerTest is a program that uses computer-based evaluation to ensure skilled craftsmen are available to meet the Air Force's changing needs. It enhances upgrade and qualification training by testing and evaluating an individual's knowledge of the principles and procedures in each specialty.

8.2.1.1. The program contains tests used evaluate task knowledge received through different media such as paper products (text), videotapes, and computer-based programs.

8.2.1.2. The CerTest program contains mandatory tests, required for upgrade. All diamond (♦) coded tasks on the STS have a corresponding mandatory test.

8.2.1.3. CerTest is also a powerful training management tool. It can be used to find the strengths and weaknesses in an individual's training and experience. CerTest automatically records and updates all test results. The training manager can copy records to a disk so that an individual can bring current, accurate training information to a new unit; thereby helping the gaining supervisor evaluate the trainee's knowledge and experience.

8.3. CerTest also enables unit personnel to develop site-specific tests. These custom-made tests standardize testing on tasks unique to a specific duty station and/or assignment. The program contains a graphics library that may be used along with a menu-driven test editor to develop these site-specific tests.

8.4. CerTest also contains optional CDC pre-evaluation tools. Volume review exercises are available for progress checks after each volume is completed. After all volumes are completed in a set, the trainee may take the course review exercise before taking the final End of Course exam at the base training office. Commanders are encouraged to integrate these tools in their unit's OJT program.

8.5. CerTest is the C.E. platform for electronic CDC testing. Currently, all CE AFSs are allowed to use AFIADL's CerTest on installations where Base Test Control Facilities (TCFs) are equipped. See your UETM for further information.

8.6. The mandatory CerTests for each AFSC are identified, by number, with its corresponding AFQTP on the 3E2X1 AFQTP Documentation Record.

SECTION D - TRAINING COURSE INDEX

9. Purpose. This section of the CFETP identifies training courses available for the specialty. Refer to the Education and Training Course Announcements (ETCA) web site, <https://etca.randolph.af.mil> for complete information on Air Force resident courses.

10. Air Force In-Residence/Mobile Training Team (MTT) Courses.

Course Number	Title	Developer
J9AQA3E231-00RA/ JCABP3E231-00AA	Pavements and Construction Equipment Operator Apprentice Course (AFSC 3E231)	366 TRS
J7AZP3E271-00AA	Pavements Maintenance, Inspection & Repair (AFSC 3E271)	366 TRS
AFCESA 3E2X1	Regional Equipment Operator Training Site (REOTS) Course	201 st RH

11. Air Force Institute for Advanced Distributive Learning (AFIADL) Courses.

Course Number	Title	Date
CDC 3E251A	Pavements and Construction Equipment Specialist	Jun 02
CDC 3E251B	Pavements and Construction Equipment Specialist (AFSC 3E251)	Jun 02

12. Exportable Courses/Information.

Course Number	Title	Date
	None	

13. Courses under Development/Revision.

Course Number	Title	Date
	NONE	

SECTION E – MAJCOM-UNIQUE REQUIREMENTS

14. No current MAJCOM-unique requirements. This area is reserved.

SECTION F - HOME STATION TRAINING

15. Purpose. The purpose of this section is to identify the tasks, training references, and training sources available in support of contingency/wartime training. Prime BEEF forces will train to meet the full range of tasks expected in the contingency environment. Training ranges from knowledge-type training conducted in a classroom (CAT I), to task-oriented hands-on (CAT II) training conducted in the field. These training requirements, frequencies, and sources are listed in AFI 10-210, Prime Base Emergency Engineer Force (BEEF) Program.

15.1. Home Station Training (HST). HST is training that is conducted at the individual's home station for contingency operations. The Civil Engineer Commander ensures training is provided and documented and arranges for subject matter experts to conduct training as required. Home Station training requirements fall into two categories, CAT I and CAT II.

15.1.1. Category I (CAT-I) Training. Personnel assigned to base level Civil Engineer units will receive initial and refresher training in all CAT I (knowledge-based) topics as shown in AFI 10-210, Chapter 4, Attachment 2. Units will use Readiness Training Packages (RTPs), Qualification Training Packages (QTPs), other multimedia training packages, videos, and AF CE standardized lesson plans to present the material. MAJCOMs may develop and require other training materials to accomplish knowledge-based training.

15.1.1.1. Prime BEEF Orientation/General Contingency. Upon assignment to the unit, all military and emergency-essential civilian employees will be trained on the unit's Prime BEEF and Emergency Management missions. The training will emphasize the individual's role and how he or she fits into the program. It will also include an overview of Civil Engineer Doctrine and explain the organization, training, equipment, operating concepts, and contingency missions pertaining to the unit.

15.1.1.2. General Contingency Responsibilities Web-based CBT(GCR). Personnel may receive annual credit for the applicable CAT I training through completion of GCR/CBT. Use of this product has become critical in light of recent reductions in technical Prime BEEF training and education. All airmen should complete this course within 90 days upon arrival at their first duty station (6 months for ARC members) and for annual recurring CAT I training requirements.
https://afcesa.csd.disa.mil/kc/login/login.asp?kc_ident=kc0005.

15.1.2. Category II (CAT-II) Training. CAT II training is primarily hands-on training as outlined in AFI 10-210, Chapter 4, Attachment 3. Units must make every effort to incorporate realism into their respective CAT II training programs. Field gear (to include primary weapons) will be used during training requirements such as, personal/work party security, convoy operations, defensive fighting positions, etc.

15.1.2.1. Combat Skills Training (CST). CST must be institutionalized as an integral part of any CAT II HST program. Lessons learned from operations such

as IRAQI FREEDOM have taught us the importance of maintaining a higher level of combat readiness. Although the inclusion of combat skills-focused training into HST does not fully prepare CE personnel to work in a high threat combat environment, the steps taken to enhance CAT II training will help elevate units to a readiness level capable of supporting safe and effective operations in low to medium risk combat environments.

15.1.2.2. Mission Essential Equipment Training (MEETS). Wartime or contingency environments often involve the use of specialized and unique mission-essential equipment the Civil Engineers do not use in their day-to-day operations. Due to the cost and complexity, mission essential contingency equipment and trainer expertise are not commonly found at CONUS installations. Personnel must be hands-on certified and the certification documented in their CFEPT. AFI 10-210, Tables 4.1- 4.6 identifies minimum personnel to be trained, positions by specialty, frequencies and locations of training sites. Inadequate training on these key equipment items can negatively impact Air Force contingency operations.

15.1.3. Category III (CAT III) Training. Team Training Venues

15.1.3.1. Silver Flag Exercise Sites (CAT III). Silver Flag Exercise Sites are located at Tyndall AFB, FL; Ramstein AB, Germany; and Kadena AB, Japan and conduct CAT III training with their major focus on students being able to perform critical contingency task in a team environment. The training focuses on bare base beddown and sustainment operations using hands-on training with BEAR equipment in a realistic beddown environment. Where possible, combat skills training has been added to the curriculum to ensure realism and help fortify combat skills mentality amongst teams. All CE personnel who fill Unit Type Code (UTC) positions will receive team training at Silver Flag Exercise Sites with the exception of members on headquarters staff augmentation UTCs, pavement evaluation UTCs, and generator repair and maintenance UTCs.

15.2. Training References.

15.2.1. AFI 10-210, Prime Base Engineer Emergency Force (BEEF) Program. Chapter four of AFI 10-210 identifies the Prime BEEF recurring training requirements. You can review this document by going to the Air Force publications web site. Attachment 2 is a list of HST CAT-I training requirements and Attachment 3 lists CAT-II training requirements.

15.2.2. Air Force Education and Training Course Announcements (ETCA). Superseded AFCAT 36-2223. It is located at the following URL: <https://etca.randolph.af.mil> lists additional training/educational opportunities available for civil engineer personnel. This catalog contains information on formal education and training courses. The catalog is updated quarterly.

15.2.3. Readiness Training Package (RTP). RTPs are lesson plans for HST lessons. The RTPs are intended for those personnel who teach any area of HST. The index and RTPs are located on the AFCESA/CEX web page. The URL for this information is
<https://wwwmil.afcesa.af.mil/Directorate/CEX/CEXX/ContingencyTrng/default.html>

15.2.4. AFCESA/CEX. Maintains a comprehensive listing of audiovisual products that support the contingency training program. To view this listing as well as gain information on how to order specific audiovisual products, please consult the AFCESA Contingency Support page, see URL above.